

# ECHO IRELAND

IRISH RADIO TRANSMITTERS SOCIETY

June 2016 - 84 YEARS



Summer McCormick MI0YLT - at 15, the youngest MI0 in Northern Ireland - Page 6



IRTS AGM : Limerick : A Selection of Trophies



Steve EI5DD : AGM Workshop Talk on NVIS

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## News from around the Clubs

### Avondhu Radio Club

**Gerard Scannell EI5KF**



Hans Krauss EI9GRB with Seoirse Neilan during 70cm VHF / UHF Field Day. Hans won this field day section. QSOs were made using a home brew 20m dipole on a TS2000 at EI1E (supervised by EI5KF).

One dipole was constructed with a 1:1 balun and another without a balun. This was one of the club's practical afternoons in preparation for exam licensees. Using a vector network analyser, members saw how the adjustments of antenna height and length affected measurements

### Tipperary Amateur Radio Group

**Hugh O'Donnell EI2HI**

On Tuesday 22nd March 2016, Olivier ON4EI/EI8GQB gave a very interesting presentation to the members of the Tipperary Amateur Radio Group. The topic of this presentation was on the use of green energy to power the contest station EI1A which is operated by Olivier in Fethard, Co. Tipperary.

This was an excellent presentation by Olivier which covered all aspects of contesting from the initial setting up of the station, antennas, equipment and to the operation of EI1A. Olivier travels to Ireland regularly from Belgium to Fethard to participate in contests.

Gerry EI8CC attend this meeting and addressed the group in his capacity as President of IRTS. TARG would like the thank both Olivier ON4EI/EI8GQB and Gerry for their attendance.



*(Standing) John EI7IG, John EI5HDB, Ronan EI5HRB, Paul EI3ENB, Eddie EI3FFB, and Eoghan EI5HBB  
(Seated) Andy EI5JF, Olivier ON4EI/EI8GQB, Gerry EI8CC, Hugh EI2HI, Tommy EI2IT*

### Skerries Radio Club

**Pat Fitzpatrick EI2HX**

The Skerries Radio Club EI2NCR activated the five-sail windmill at the Skerries Mills complex during the recent Mills on the Air weekend held on the 14<sup>th</sup> and 15<sup>th</sup> of May. The Skerries Mills complex has also a four-sail windmill and a watermill all in operation within an area of a few acres.

Club members met at the club house to organise the radio, power supply, poles, aerials and some other vital pieces of equipment like the kettle, tea bags and biscuits! When the group arrived at the mill we made the area safe for everyone including visitors so that when a tour was taking place a few of us would make sure that people kept well clear of the aerial supports while viewing the mill.

The main equipment used for the weekend was a Kenwood TS-570D for the shack and a full size G5RV, a Kenwood TS2000 and a Windom aerial were on hand just in case they were needed. As the conditions were not good for the weekend, the idea of going full contest mode using multi operators and multi rigs was dropped and the other rig was put back in the car. The aerial was kept in the air by an 11m mast in the centre with some other poles at each end of the aerial keeping it as high off the ground as we could, allowing for the sloping ground.

The weather for the weekend was good with plenty of sun and with a wind known as a lazy wind (it would go through you for a short cut). Some experimenting was done over the weekend. Derek EI7CHB used a drone in an attempt to keep

up a top-band vertical. However, when we pressed the tuner the drone became unstable so that idea was scrapped before the drone was.

Over the weekend we worked nearly a hundred stations including the IRTS news station and some rare callsigns from the wee county. A big *Thank you* to the management and staff of Skerries Mills for their help and time and for the loan of the mill for the weekend. Remember to drop in if you are in the area. They would only be too happy to look after you and show you around the mills. You could do worse than to feast on their excellent food, be it a bowl of soup or a full meal, and round off your day with a visit to the craft shop.



*Michael EI1548, Derek EI7CHB, Austin EI3HS, John EI8BZ, Pat EI2HX.*



*Ben EI4IN at EI2NCR*

## Cork Radio Club

### Dave Moore EI4BZ

Cork Radio Club held their Annual General Meeting on Wednesday May 11th with a fine attendance at Carrigtwohill Community Centre.

In the election of officers:

Chairman	Jerry EI6BT
Secretary	Dave EI4BZ
Treasurer	Jim Barry EI8GS
QSL &	
Awards Manager	Tim McKnight EI2KA

Committee members comprise of Dave Deane EI9FBB, Denis EI5GSB and Jack EI7HO. The club will continue to

hold meetings monthly on the second Wednesday each month at Carrigtwohill Community Centre with a starting time of 8.30pm.

The next confirmed outdoor events for the club are the CW Field Day on the 4<sup>th</sup> and 5<sup>th</sup> of June and the SSB Field Day on September 3<sup>rd</sup> and 4<sup>th</sup>.

The summer barbeque will be held in July and the annual dinner in November. Several other events are in the planning stages and will be confirmed in due course.

Tributes were paid to Vincent EI7HN for his commitment to broadcasting the weekly IRTS Radio News bulletin at 8pm every Monday night on the Cork Repeater. Listeners are encouraged to stay on frequency after the bulletin and also to support the Cork Repeater Activity night at 9pm every Thursday.

Members are asked to pay their annual membership fee of €20 to Treasurer Jim EI8GS as soon as possible. New members are very welcome, especially anyone who intends to study for the licence examination.

Anyone interested is invited to call to Carrigtwohill Community Centre on the second Wednesday of any month and further information is available from Dave EI4BZ on 087 629 0574, or email to ei4bz at eircom dot net.

## Dundalk Amateur Radio Society

### Brian Whelan EI8EJB

The Dundalk Amateur Radio Society held its AGM on Wednesday night 4th May. Congratulations was given to Jarek, ex-EI1698, who obtained his new callsign EI7HCB the day before.

The following officers were appointed:

President	Tom EI9CJ
Chairman	Brian EI8EJB
Secretary	Hugh EI9KF
Treasurer	Jim EI2HJB
PRO	Tony EI4DIB
Caretaker	Ivan EI1166

The Dundalk Amateur Radio Society looks forward to a busy new club year culminating next April when we host the IRTS 85th AGM.

DARS is holding a Radio Shack photography competition, with the emphasis on picture quality. Any shack of any size is eligible.

Please send your photo (from 1 to 3Mb JPG) to myshack@ei7dar.com.

You should submit your shack photo together with the entrance fee which can be paid by PayPal by the closing date of 28th February 2017. Further details from the club website [www.ei7dar.com](http://www.ei7dar.com). Winners will be announced at the 2017 IRTS AGM in Dundalk.



## South Eastern Amateur Radio Group

### Sean Byrne EI2HZB

The SEARG AGM was held on 29th February in the Roanmore Centre, Waterford. Vice-Chairman John EI3HQB thanked the large crowd for attending. John then reported on the year's activities, most notably the hosting of the IRTS 83<sup>rd</sup> Annual weekend in Kilkenny in April 2015.

The activities included the Geopark Weekend, and the Railways on the Air from Kilmeaden with EI2WSVR the only station from Ireland.

The following committee was appointed for 2016:

Chairperson	Eoghan Kinane EI5HBB
Vice Chairperson	John Tubbritt EI3HQB
Secretary	David Ginda EI6GVB
Treasurer	Mark Wall EI7IS
PRO	Sean Byrne EI2HZB
Club Officer 1	John Ronan EI7IG
Club Officer 2	Wayne Lewis
SWL & Club Officer 3	Kieran Howley EI9DHB.

### Radio Theory Course

SEARG have been running theory classes since 25<sup>th</sup> January 2016, with seventeen students signed up. The classes were held initially in the Waterford Institute of Technology (thanks EI5HBB) and later in the Roanmore Centre. Our thanks to Mark EI7IS, the main tutor and to David EI6GVB and to Keith EI5KJ. At the time of writing the next exam is due to take place on the 2<sup>nd</sup> of June in both Dublin and Waterford. We wish all the candidates the very best of luck and we hope to hear you all soon on the air.

## Shannon Basin Radio Club

### Brian Canning EI8IU

Activity-wise it has been a quiet few months. However the recent spell of good weather brought the opportunity of carrying out some antenna work with club members helping Fergus EI6IB to erect his new multi-band HF antenna.

Assistance was also needed by Craig EI3FW to get his new Cobweb antenna into the air. Both ventures were successful with both antennas working lots of DX and also receiving good reports.

Club members will take part in the IARU HF World Championship, on 9/10th July as part of the EIDX Group team in Garbally College, Ballinasloe. EI0HQ will be the callsign for the multi-multi category in the contest. This will be a great opportunity to see a large contest station in action so visitors are very welcome. For more details contact Dave EI9FBB or PAT EI9HX, QTHR

Our next club meeting is on the 15th July at 8.30pm in Hannons Hotel, Roscommon Town.  
[www.shannonbasinradioclub.com](http://www.shannonbasinradioclub.com)

## Lough Erne Rally Report

### Michael Clarke MI5MTC

Many thanks from Lough Erne Amateur Radio Club to the well over 200 folk who played a part in the success of our 35<sup>th</sup> Rally in the SHARE Centre on 8 May 2016 - our ninth at this excellent venue, which is also celebrating its own 35 years of service to the community. SHARE is the largest residential and activity centre in Ireland.

As before, there were no table charge. Everyone in the arena simply paid the door fee: trader, exhibitor or just attending - as many did from all over Ireland, maintaining the long tradition of SHARE being the major annual meeting place for EI and GI radio amateurs. Generous support for the Raffle further secured the rally's financial stability: again, thanks to all involved for vital support.

Months of recruitment by rally organiser, Mark EI4HDB/MI0PAS ensured that the major traders were there: tables over 30ft long, with many amateurs offering shack-surplus bargains, or the like of Tom MI0IOU's modern RPi goodies, Graham G3MFJ came over from Leeds with the GQRP Club stall. Other chat-hubs included Raynet, Mayo Radio Experimenters Network, West Tyrone and Omagh Repeaters, BYLARA, IRTS and RSGB with St Patrick's Day certificates. For Regional Manager Phillip MI0MSO/EI8GPB, the Erne Rally was an apt place to present Club of the Year Awards.

Before eBay and the like, rallies were the main outlets for radio equipment display and purchase: today this is just not so. We need to start back from core, rallies as common gatherings for exchange among the variety of amateur radio interests. Add traders, shack-clearance etc. and it works. Herbie GI6JPO made a video of the rally for YouTube.

<https://www.youtube.com/watch?v=zZiVlfmTio>

We look forward to seeing you all at the next Erne Rally in SHARE on Sunday 7 May 2017.



*Graham G3MFJ of GQRP from Leeds.*

## GI News

### Philip Hosey M0MSO / EI8GPB

#### GI On The Air

A new Facebook page has been created by the RSGB Region 8 Team (Northern Ireland) to encourage and support on-air activities of clubs and amateurs. GIOTA (GI On The Air) is encouraging everyone to get on air, any band and any mode on the first Friday of each month. Please post your 5W's (Who, What, Where, When and Why)  
<https://www.facebook.com/Region8GIOTA/>

#### RSGB Train The Trainers

An RSGB Train the Trainers course will be held at the Greystone Community Centre, Antrim, on Saturday 23rd July, hosted by Antrim & District ARS, MN0GFE. The Course runs from 9am until 5pm and is free for RSGB Members. If you are interested please contact Philip M10MSO at [rm8@rsgb.org.uk](mailto:rm8@rsgb.org.uk) to book your place. We look forward to seeing as many as possible.

#### St Patrick's Day Award - 2016

This was a day of mixed success, with 41 stations registered for the event. The award now has a dedicated Facebook page <https://www.facebook.com/St-Patrick-Award-1100697056639846> in addition to the website [stpatrickaward.webs.com](http://stpatrickaward.webs.com). We are already registering callsigns for 2017, with the event running over a 48hr period for the first time.

#### Skiffie Worlds

In July the week-long Skiffie Worlds 2016 will be held in Delamont Country Park, Killyleagh from 24th to 30th July. This is the St. Ayles Skiff Coastal Rowing World Championships with over fifty boats from around the world.

Bobby M10RYL will be running a special event station over the week and is asking for volunteer operators to assist on air over the week covering as many modes and bands as allows. If interested, contact Bobby at [drm82@rsgb.org.uk](mailto:drm82@rsgb.org.uk)

#### Youngest M10

The cover of this issue of Echo Ireland shows Summer McCormick from Moira, Co. Armagh who passed her Amateur Radio Examination, Advanced Level, on 6th May 2016. Aged 15, she is the youngest advanced licensee in Northern Ireland, and the proud owner of M10YLT - Young Lady Transmitting.

### News from the Clubs

We welcome regular contributions from all clubs affiliated to IRTS, especially when accompanied by clear crisp photos (pixels are precious), together with captions identifying everyone.

Please let us know what you have done and what you are planning.

The way to get your news items printed is to make it easy for us to print them!

## JOTA 2016 Paul Martin EI2CA

JOTA (Jamboree On The Air) is a joint worldwide event involving Scouts and amateur radio operators which is held every year on the third weekend in October. It is not a contest, more a QSO party where Scouts through the medium of amateur radio can talk to other Scouts in other countries and so experience that special international friendship that is an important element of both Scouting and amateur radio.

Every year over one million Scouts worldwide participate and there are always a number of Irish stations active. This year Scouting Ireland, the national association, has asked IRTS to help them expand Irish participation in the event which will be held on the 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> of October next. Stations can operate for part or all of the event with small groups of Scouts visiting an operator's shack for a few hours over the weekend, or, a radio club or other group of operators setting up a station in the local scout den or campsite.

While Scouting has sections for all age groups, this activity is best suited for the sections dealing with the 12 to 18 age group, which are 'Scouts' and 'Venture Scouts'. I have run a station for these sections in Navan for the last few years and have been genuinely surprised by the interest and enthusiasm shown by the young people. There are some internet activities running parallel with the event, but it is the radio contacts that really grabs their interest. At our station we have concentrated on 40 and 15 meters which seems to give us a good mix of European and DX contacts, and operated from 1000 to 1800 local on the Saturday, but given the level of interest we hope to expand operations this year.

There is some good support material already available for the Scouts and IRTS will develop a briefing document for operators to help you get the most out of the event. Clubs would be open to making an application for supporting funds under the IRTS PAR program to assist in covering costs of mounting a station.

If you are interested in helping out with this event (we need you!) please get in touch with me by email [paul@comma.ie](mailto:paul@comma.ie). I should mention that I am somewhat biased towards this event as my own introduction to Amateur Radio was when, as a 12 year old Scout, I walked into a station at an international Scout camp. As they say, "the bug bit" and within two years I had my callsign and so began a lifetime adventure with radio. What a lot of fun I would have missed if that operator had not taken the time to show me "the world at his fingertips"!





# The Sun: Friend & Foe

## Brian Whelan EI8EJB

**The Facts:** At 4.6 billion years, the Sun is classed as being already middle-aged. Apart from the obvious heat and light emission, the Sun can also emit streams of charged atomic particles known as Solar Wind, not to mention seriously strong magnetic fields. These all combine to have major effects on our chosen hobby.

How often have you heard someone saying that “*there’s a solar flare on the way so things are going to be really bad for next few days*”? Are they correct? Read on...

There are many parameters to consider when talking about the effects of space weather on radio communications, and I will try to clarify some of the myths.

**The Sun:** Our nearest star is the most seriously turbulent place that any of us will ever witness. In essence, the Sun is one continuous nuclear fission reactor emitting NAMA-sized quantities of energy. The flows of hot plasma in the convection zone create the solar magnetic field. The plasma is a hot gas “soup” with many free charged particles (electrons and protons). The moving charges from currents, and produce magnetic fields, just like currents in wire coils. It is this magnetic field that can have such a dramatic effect on radio propagation on Earth.

**Sunspots:** Yes, anyone who has ever dabbled in radio communication has at some stage mentioned “sunspots” in relation to good or poor propagation, especially at HF. We all know that there is an eleven-year cycle in which the number of sunspots increases, reaches a maximum, then tapers away again. Something I only heard recently is that this is caused by a flip in the Sun’s magnetic field. Sunspots occur when strong magnetic fields emerge through the solar surface and allow the area to cool slightly, from a background value of 6000°C down to about 4200°C. This cooler area appears as a dark spot on the Sun. The greater the number of sunspots, the greater the possibility of solar flares and/or coronal mass ejections.

**Solar Flares:** These are sudden explosions from the surface of the Sun, and are caused by the tearing apart and reconnection of strong magnetic fields. They can be seen as bright areas and detected as bursts of radio noise. The electromagnetic emissions produced by flares, such as X-Rays, travel at the speed of light and take eight minutes to reach us, affecting the daylight side of Earth.

**Coronal Mass Ejections:** Again, these are explosions, but originating in the Sun’s outer atmosphere, the Corona. These explosions, unlike those of solar flares, contain plasma, the soup mentioned previously. CME’s do not travel so fast, only reaching speeds of hundreds of kilometres per second. A CME outburst contains protons, electrons and powerful magnetic fields. Compared to solar flares, CME’s do not appear so bright and can take up to four days to reach us.

How do these events actually affect radio propagation? Solar flares cause radio blackouts, depending on the intensity of the flare. The greater the flare, the greater the amount of ionisation that the sunlit side of the earth receives. This

allows radio waves that are normally refracted back to the ground to pass unhindered out to space through the ionosphere. Hence the blackouts. The first time you hear one, you will probably check that the antenna feeder is connected, because it is so eerie to hear a congested band suddenly fade away into the noise. The only redeeming factor is that they normally last a short time, from minutes to a few hours.

CME’s cause geomagnetic storms which disturb the Earth’s magnetic field. When this field is bombarded by the CME’s protons, electrons and magnetic fields, our magnetic field throws what we can call “a wobbler”. It sort of does a re-boot and tries to adjust itself to the sudden influx of energy contained in the arriving CME. One of the side-effects of a Geomagnetic Storm is the beautiful Aurora, the Northern Lights. But severe storms can cause quite an upset; power distribution grid systems can suffer blackouts due to induced high currents from the upset magnetic fields; long metallic pipelines can be induced with huge currents, spacecraft operations are affected and so on. Of course, HF communications are affected by geomagnetic storms resulting in Polar Cap Absorption (where CME energy is funnelled down towards the polar areas by the Earth’s magnetic field), aurora absorption and multi-pathing causing RF to be absorbed. Unlike the sudden arrival of solar flare effects, geomagnetic storms can be predicted, but like an unwelcome guest, can take days to dissipate.

A third and less-common event is a **Solar Proton Event**. These cause emissions of high-energy cosmic radiation which can produce satellite disorientation, spacecraft electronics damage, spacecraft solar panel degradation, extreme radiation hazard to astronauts, launch payload failure, high altitude aircraft radiation, slight HF radio fades and disruption in polar regions, ozone layer depletion, cardiac arrest, dementia and cancer (*all these effects are genuine*). They are less significant in terms of radio propagation.

As you can see, space weather can be complex. Several amateur radio sites display solar data widgets giving a Real-time forecast of the state of play for radio propagation (Picture on next page). The main parameters are :

**Solar Flux Index:** A measurement of the solar radiation intensity at a frequency of 2800 MHz. The higher this figure is, the more ionized the F-layer is (*the good layer for DXing*) and the higher the frequency that can be used for DXing. Ranges from 62.5 to 300

**Sunspot Number:** Loosely correlates to the Solar Flux Index. Ranges from 0 to 250

**K:** A measurement of the horizontal component of the Earth’s magnetic field. Low values good, high values bad.

**Kp** is a global average value determined from different measurement locations around the planet. Ranges from 0 to 9

**A:** An average of K values over 24 hours, intended to give a better overall picture of the K values. High K and low A indicates a sudden disruption in the Earth’s geomagnetic field, causing auroral events. **Ap**, like **Kp**, is also a global average value. Ranges from 0 to 400



**X-Ray:** A measure of the intensity of X-Rays hitting the D-Layer. As mentioned already, Solar Flares produce large values of X-Ray emissions. Ranges are A, B, C, M and X, where A is the lowest value with an appended number denoting the severity.

**Solar Wind:** The speed, in km/sec, of particles heading for Earth. This early-warning value is sent from a satellite located between the Sun and us. I call this the “*Tá an CME ag teacht...*” warning! Values above 500 km/sec affect HF. Ranges from 0 to 1000

**Maximum Usable Frequency:** Shows the maximum frequency above which no meaningful propagation should exist. Updated every 15 minutes. Ranges from 0 to 100 MHz

Let’s take a look at an example of solar data (right.) This is a widget snapshot of conditions just before St. Patrick’s Day this year:



**SFI** is 93, not so good. Good figures would be 150+

**SN** is 57, not the best either.

**K** is 4 and **A** is 14, both relatively high figures, again indicating “a disturbance in the Force”; not good news.

**X-Ray** is B2.9, almost a B3, so no major solar flare casting forth X-Rays in recent hours.

**SW** is 521.4; as mentioned above, levels above 500 have an influence on propagation. High values indicate CME activity.

All in all, this widget portrays a pretty dismal HF propagation scenario. Going strictly by the book, if you saw such poor Solar Data *before* you turning on the HF rig, you probably wouldn’t bother. The other figures shown in widgets such as **Bz**, **Ms** and **Es** may be disregarded for the moment.

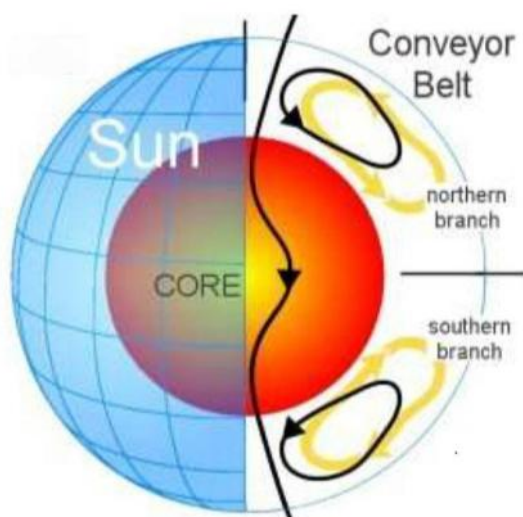
To summarise: best conditions for DX occur when the SFI is above 150 and remains so for a few days, and when the K value is at 2 or below, again remaining there for a few days.

Happy DXing!

## Solar Cycle 25 - Weakest in Centuries?

According to David Hathaway and Tony Phillips of NASA, we could be in for relatively poor HF conditions at the peak of the next solar cycle in 2022. They say the Sun’s Great Conveyor Belt has slowed to a record-low crawl, and this has important repercussions for future solar activity.

The Great Conveyor Belt is a massive circulating current of fire (hot plasma) within the Sun. It has two branches, north and south, each taking about 40 years to perform one complete circuit. Researchers believe the turning of the belt controls the sunspot cycle, and that’s why the slowdown is

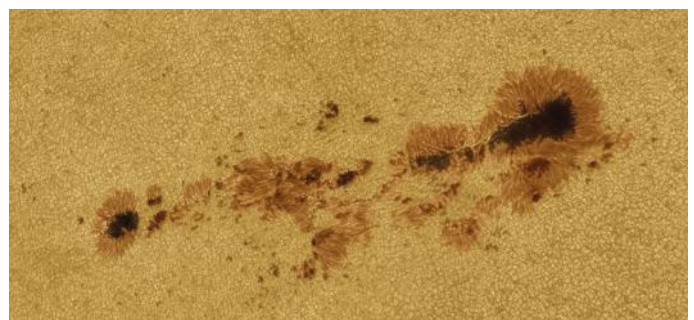


important. "Normally, the conveyor belt moves about 1 metre per second - walking pace," says Hathaway. "That's how it has been since the late 19th century." In recent years, however, the belt has decelerated to 0.75 m/s in the north and 0.35 m/s in the south. "We've never seen speeds so low."

According to both theory and observation, the speed of the belt foretells the intensity of sunspot activity around 20 years in the future. A slow belt means lower solar activity; a fast belt means stronger activity.

Using historical sunspot records, Hathaway has succeeded in clocking the conveyor belt as far back as 1890. The numbers are compelling: For more than a century, "the speed of the belt has been a good predictor of future solar activity."

Read more at: <http://phys.org/news/2006-05-solar-peaking-weakest-centuries.html#jCp>



Sunspots -10 July 2013 - NASA





# IARU Matters

## Dave Court EI3IO

### IARU Interim Meeting, Vienna 2016

The Interim Meeting of Committees 4, 5 and 7 met from 15th to 17th April. This article addresses the activities of Committee 4 (HF and below) and Committee 5 (VHF and above) which the author EI3IO attended. Because these two committees met concurrently part-time was only possible in both meetings.

#### Key HF Developments

- 630m beacons not supported.
- Below 10 MHz lower sideband (LSB) is recommended and above 10 MHz upper sideband (USB) should be used. The exception to this is on the 5 MHz band where USB is recommended.
- Proposed usage plan in Region 1 for the WRC-15 60M - 5 MHz allocation, to be harmonised across all regions if possible:
- 5351.5 – 5354.0 kHz 200 Hz BW CW / narrow band modes
- 5354.0 – 5366.0 kHz 2.70 kHz BW All modes, USB recommended for voice operation
- 5366.0 - 5366.5 kHz 20 Hz BW Weak signal narrow band modes
- It is strongly recommended that frequencies within the WRC-15 allocation should only be used if there are no other frequencies available at 5 MHz under domestic regulations.
- Local nets and long rag chew type QSOs should not use the WRC-15 5 MHz allocation but should instead make use of the 3.5 MHz, domestic 5 MHz or 7 MHz bands where there is more spectrum available.
- It is recommended that the IARU Region 1 band plan for 30m be revised as follows:
- 10,100 – 10,130 kHz 200 Hz BW CW 10,116 kHz QRP activity centre
- 10,130 – 10,150 kHz 500 Hz BW CW / narrow band modes Digimodes
- Note beacons in the 30m band are operating contrary to IARU recommendations (DK0WCY excepted)
- It is recommended that the IARU Region 1 band plan for 80m be revised as follows:
- 3500 – 3510 kHz 200 Hz BW CW Intercontinental priority
- 3510 – 3560 kHz 200 Hz BW CW Contest preferred 3555 kHz QRS activity centre
- 3560 – 3570 kHz 200 Hz BW CW 3560 kHz QRP activity centre
- 3570 – 3580 kHz 200 Hz BW All narrow band modes Digimodes
- 3580 – 3590 kHz 500 Hz BW All narrow band modes Digimodes

- 3590 – 3600 kHz 500 Hz BW All narrow band modes Digimodes, automatically controlled unattended data stations.
- Contests should be restricted to 160, 80, 40, 20, 15 and 10m. That is the 60, 30, 17 and 12m bands should therefore not be used for contests.
- Contest managers in Member Societies are requested to ensure contest preferred segments are specified in contest rules where applicable.

#### Key VHF (and above) Developments (see also VHF Managers Handbook)

- Removal of obsolete or no longer necessary footnotes in the 144 MHz bandplan.
- General review of VHF band planning
- Correction of the 5 GHz satellite segment in the band-plan and protecting narrowband applications, which have priority.
- Encourage Member Societies and members to use the old 6m beacon segment for CW. (at 50.031-50.100 MHz)
- In Varna (2014 Conference) it was decided that all the non-coordinated beacons shall be moved prior to end 2015 to the new beacon segment (50.400 -50.500). Some are still active on the old frequencies. Beacon keepers should also be encouraged to use the new segment.
- On APRS additional 144 MHz frequency compatible with R2 to be considered. Also consider 435 MHz APRS usage and newer APRS technologies for the 2017 GC.

IARU preparations for ITU WRC-19 were also addressed as was the YOTA programme.

Recommendations are agreed by the Executive Committee on an interim basis until the next General Conference. All recommendations therefore need to be ratified at the 2017 Conference in Landshut, Germany.



*C4 Committee meeting in Vienna*



## Homebrew Off-Centre-Fed Dipole

Gerry Kavanagh EI8DRB

gerryk.com

During HF field day 2010, I had occasion to get some experience with the off-centre-fed dipole, in this case, a commercially made unit from Buckmaster. Prior to this, I had heard that OCF dipoles 'are a compromise', 'are noisy', 'are deaf', 'have wildly varying radiation patterns' and many other negative comments. During field-day, our experiences definitely gave me cause to doubt the nay-sayers.

Around this time, I moved to a new house, and as always, part of moving involves planning out the new antennas. In my situation, the property is long and narrow, and has a number of medium-tall trees (> 50ft). The house, however, is at one end of the property and, while there are trees located such that an antenna would be oriented broadside slightly north of west, having any balanced antenna, such as a multiband dipole or doublet, would have the feedpoint quite a distance from the house and would definitely push the 'untidy wires' beyond the XYL acceptance threshold.

With this in mind, using Google Maps I modelled a few potential candidates for OCF installation. By the grace of the RF gods, two of the taller trees are almost perfectly oriented. With the short end of the OCF dipole beside the house, the feedpoint is within 20' of the house. This removes the need for ugly, and loss-inducing, long runs of feeder.

I have an aversion to purchasing what can be made by oneself, especially where the making is also educational. As a result, I did some investigation into what designs would give the best performance, along with longevity and cost factors being considered. The result was a 4:1 current balun consisting of two 1:1 baluns wound onto 3 inch mix 43 toroids, with two legs made from hard-drawn copper. The legs were to be cut for 80m, at a ratio of 2:1, giving leg lengths of ~90' and 45'.



*This time, the impedance matched what it should, being slightly short of 100 ohms. The next stage was to connect the two 1:1 baluns back to back, giving a 4:1 balun, with an input impedance of ~200 ohms and an output impedance of the familiar 50 ohms.*

toys for doing all sorts of analysis on RF systems, including a mRS MiniVNA, which generates high quality plots of frequency response, SWR, loss and so on.

John did an analysis on a number of baluns, from the barely affordable to the inexpensive. This was quite revealing in terms of the varying quality of commercially available baluns. Loss figures on the edges of the HF bands varied from <1dB to >5dB for baluns sold as 'broadband' or 'HF'. SWR also varied from as little as 1.3:1 on the edges to as much as 2:1, and sometimes increasing to well beyond 3:1 around Topband.

The baluns that came out on top were expensive and generally unavailable locally thereby necessitating the further expense of shipping from the US, and the likely possibility of a VAT and duty levy. More justification for a home-brew! I started by winding two toroids bifilar with 4swg enamelled copper wire.

Four 50 ohm resistors in series at one end, and the MFJ 259B Antenna Analyser on the other gives preliminary SWR of 1.1:1 across almost all of the HF band, rising slightly to 1.3:1 at the lower bounds of 1.5MHz. An encouraging start.

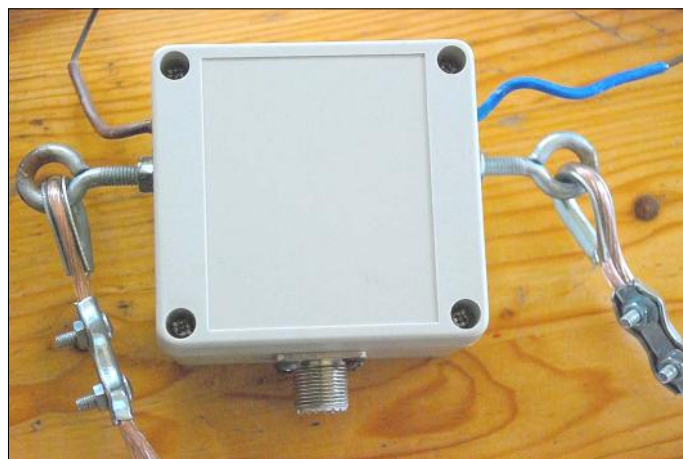
Mounting the entire assembly in a waterproof (IP40) case was a relatively straightforward operation. I drilled mounting



*I tested these, and found that they exhibited a lower characteristic impedance than was required. I needed ~100ohm, and these were about 60ohms. So, I tried again, but with a wider spacing between the wires. This spacing could be provided by using insulated wire, so using 1.5mm<sup>2</sup> domestic wiring, I rewound...*

Studies done by John EI1EM confirmed that building my own balun would be a far preferable course of action compared to purchasing one. John has a number of wonderful





holes for galvanised eyes and a further one for the antenna socket (SO239), and two more for pigtails to allow the antenna legs to connect to the balun.

Once this was all done I attached two legs cut from hard-drawn copper and cut roughly to a 2:1 ratio as per standard OCF dipole design and proceeded to fine-tune the lengths. After a bit of pruning I got an acceptable SWR on 80m, 40m, 20m, 15m and 10m, with a surprisingly low 2.1:1 on 6m also. The maximum SWR was 2.3:1 on 20m, but I figured that the internal ATU in the IC756 ProIII would deal with that.

On testing, I arrived at the conclusion that the antenna as installed at about 45' was both sensitive and quiet. I also got number of satisfactory reports on 80m and 40m, and so deemed the construction a success.

However, things are never as simple as they first appear. The antenna was fed with 30m of RG213 with the last 10m suspended from the feedpoint. This, coupled with the heavy balun, caused the feedpoint to remain relatively static while the rest of the antenna moved around in the breeze. By itself not a huge problem, but when coupled with the wild winds of the West it caused my new antenna to last about a month before landing on the roof, one leg having broken right at the feedpoint, presumably having been work-hardened from the continued oscillation.

Not quite back to the drawing-board but certainly some of the failings of the antenna had to be addressed. The first replacement was the antenna legs. Discarding the hard-drawn copper for something a bit stronger and more resilient I splashed out on 50m of PVC-coated Flexweave. Not cheap, but I expected that this would be a bit more long-lasting than the previous effort. The next item to be swapped out was the feedline. Instead of the heavy RG213 I used a similar weight of RG8X, which is much smaller in diameter and weight, but more flexible and not much more lossy.

I also replaced the terminators with heavier-duty units purchased from the hardware shop giving a more flexible but much sturdier connection to the balun eyes from the antenna legs.

I re-hoisted and retuned the antenna with the help of Steve EI5DD who devoted a Saturday to the effort and by afternoon we had the antenna up and tuned. This time we took even more time in the pruning operation and as result achieved <2:1 SWR on almost all bands.

That was a few months back and to date despite the best efforts of some Springtime gales the antenna is still up. I have since added weighted bungee cords to the ends of the hoisting ropes to add even more flexibility to the system and help prevent the Galway weather taking its toll too much.

## Radio News Bulletins and Readers

### Sunday

National	1100	7.123	SSB	Sean EI7CD, Ger EI4GXB, Paul EI2CA
National	1130	7.128	SSB	(as Gaeilge) Danny EI6GS
Dublin	1145	145.525	FM	Tony EI5EM, John EI7JG, Frank EI6EF, Liam EI3HK
National	1200	3.650	SSB	Ger EI4GXB, Sean EI7CD, Eddie EI3FFB
Mayo	2100	145.600	FM	Padraic EI9JA, John EI7FAB,
				Mike EI2EO, John EI3JM, Dominic EI9JS
Tipperary	2030	145.450	FM	Tommy EI2IT, Eddie EI3FFB

### Monday

Cork	2000	145.750	FM	Vincent EI7HN
Limerick	2000	145.725	FM	Brian EI9AL, Simon EI7ALB, Ger EI4GXB, Liam EI7DSB, Tony EI2AW
Louth	2000	145.675	FM	Tony EI4DIB, Thos EI2JD, Anthony EI2KC, Jim EI2HJB

### Tuesday

Waterford	2130	145.650	FM	David EI6GVB
North Cork	2030	430.925	FM	Lisa EI9GSB, Robbie EI3GGB



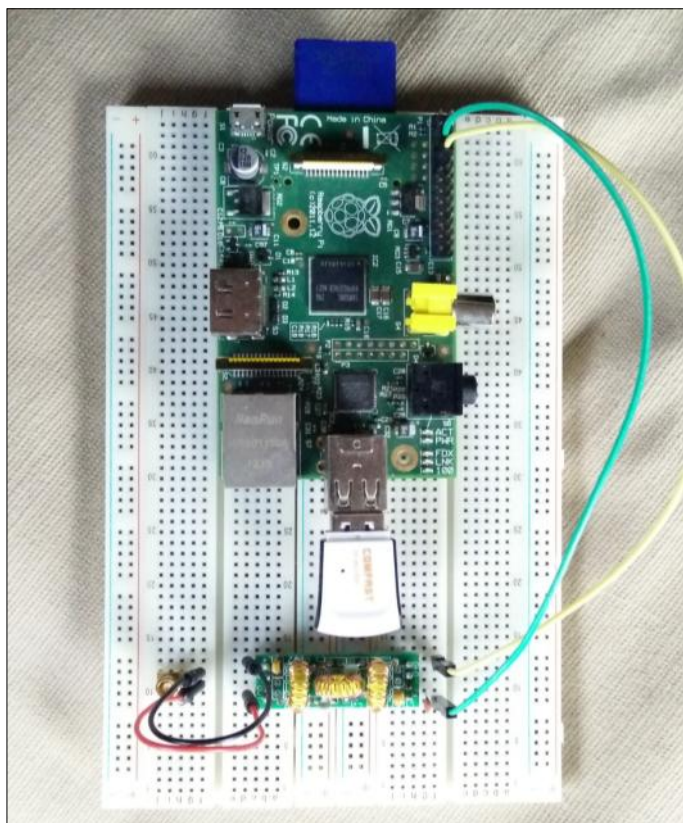
# Whispers in the Air

Conor Farrell EI6GSB

conor@conorfarrell.com

The advent of miniature and low-cost computers has allowed the world of “hacking” to progress at a great rate, giving professionals, hobbyists, and even children the chance to explore technology and computing.

The credit-card sized Raspberry Pi is my computer of choice, as it provides no end of entertainment and learning opportunities. I’ve used it to build a functioning miniature weather station and I’m currently planning to use one as the “brain” of a robotic lawnmower (this summer’s project!). Right now, as I write this, I’m using a Pi as a transmitter.



*The Raspberry Pi resting on a breadboard. The filter is at the lower end of the photo, and the socket for the antenna is to the lower left.*

You may have heard of the WSPR protocol. Aptly pronounced “whisper” it uses a transmitting power on the scale of tens of milliwatts broadcasting an FSK signal made up of a callsign, Maidenhead locator code, and output power in dBm. A WSPR signal broadcasts on even minutes (e.g. 10:02, 10:04, etc.) and takes about 110 seconds to complete its broadcast. A slightly different protocol, WSPR-15, broadcasts every 15 minutes. On the receiving end a receiver will automatically decode the signal into its parts and upload the data to an online database at [www.wsprnet.org](http://www.wsprnet.org). On this website you can plot a map of where your signal was spotted.

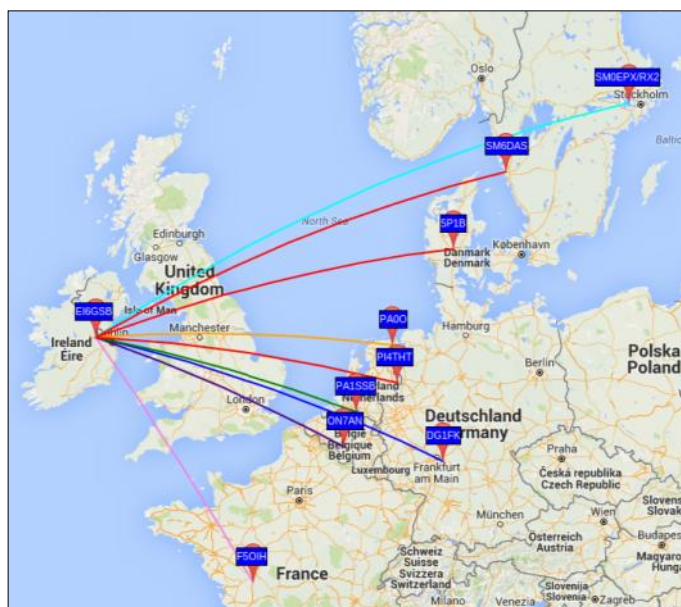
WSPR was developed by Joe Taylor K1JT (a Nobel Prize winner) and released in 2008. Since then, other software has been developed specifically for the Raspberry Pi.

So how do you do all this? I won’t go into the finer details on getting everything set up but I want to give you a summary. First of all you’ll need a Raspberry Pi which will cost around €50 including power supply and delivery. For my WSPR beacon I use a Model B which has 512MB memory and a 700MHz processor - plenty of power for this project. I have mine set up to work without a monitor so it automatically connects to my home WiFi network and emails me its IP address so I can connect to it.

There’s a variety of WSPR beacon software available and I use one called WsprryPi - available from <https://github.com/JamesP6000/WsprryPi>. WSPR requires accurate timing but the Raspberry Pi doesn’t have an on-board clock; to get over this you should use an NTP service on your Pi which will connect to time servers and update your clock.

The Raspberry Pi isn’t really designed to be a transmitter but the clever use of one of its pins allows it to be used as such. Pin 4 is a clock pin and is often used for outputting electrical timing signals. WSPR software modifies the frequency of the signal coming from this pin so that it outputs frequencies that can be used for radio. However, as it wasn’t meant to be used like this the output signal is also unfiltered. I picked up a couple of low pass filter kits from QRP Labs which were easy to assemble and work quite well though you might want to assemble your own.

My antenna is a half-wave dipole (good for 30 metres) fed with some coaxial cable. I haven’t used any baluns or anything on my setup just yet. The antenna is currently attached to a long washing line in the garden!



*A plot of signals after the “spots” have been uploaded to the internet by the receivers. It shows EI6GSB’s location and the locations of the receiving stations.*

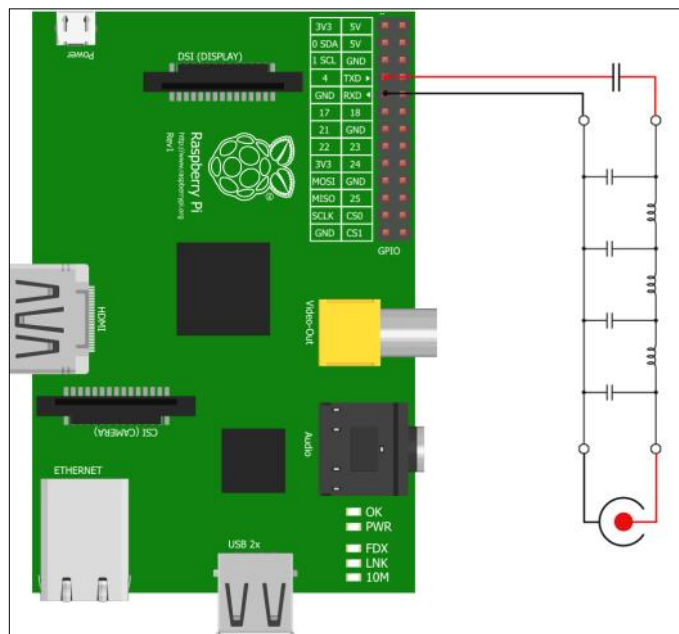


To summarise - the Raspberry Pi generates the WSPR FSK signal. This signal is fed into a low-pass filter (with a decoupling capacitor). Finally, the filtered signal goes to the antenna. Simple!

Once you begin transmitting WSPR your spots should be available to view on [www.wsprnet.org](http://www.wsprnet.org) within a minute after the transmission ends. If you don't see anything the transmission frequency may need adjusting, or as is often the case the band conditions just aren't great.

So far I've had good success with my WSPR beacon. I regularly get good spots all over Europe though I'm hoping to get transatlantic soon once the conditions are perfect! The transmission power is about 10mW or so, so it's amazing to see my signal being picked up by other stations around the continent. As you can see setting up the beacon is a fairly simple project and transmitting takes little to no input from the operator. This may not appeal to everyone but I think it's a great way to get started in "hacking" together a QRP radio and for experimenting with antenna setups.

Best of luck with your Raspberry Pi WSPR beacon, and hopefully I'll see you on the air!



*The signal comes from GPIO4 (fourth pin down on the left hand side) and GND is just below it to it. The signal is fed through a decoupling capacitor (I used 1nF) to a low-pass filter, shown here as the QRP Labs LPF layout, before going to the antenna.*



## ITU Matters

### Dave Court EI3IO

The ITU Working Party 5A (WP5A) preparing the technical bases for the 2019 World Radiocommunication Conference (WRC-19) of the International Telecommunication Union (ITU) concerning terrestrial radiocommunications (except broadcasting) met in May 2016.

Amateur service activities were addressed by the IARU delegation and amateurs on national delegations representing IARU MS. Most of IARU's resources were spent on initiating work on agenda item 1.1 dealing with the consideration of a harmonised allocation in Region 1 (Africa, Europe and Middle East) with that in Regions 2 and 3 in the frequency band 50 – 54 MHz and revising Recommendation M.1732.

This recommendation specifies the technical characteristics of amateur and amateur-satellite systems for use in sharing studies with other radiocommunication services. Further work will be conducted by the IARU team in the intervening period until the next WP5A meeting in November 2016.

In other amateur work IARU informed the group responsible for wireless power transfer studies that there is an allocation to the amateur service at 135.7-137.8 kHz and expressed an expectation that the amateur service needs to be included in future liaison activity.

Other groups within WP5A deal with three other WRC-19 agenda items of potential impact: 1.11 (train-to-trackside communication systems), 1.12 (Intelligent Transport Systems), and 1.16 (RLANs at 5725-5925 MHz)

The first two appear to be going well for the amateur service at this early stage. RLANs are not and further work will need to be done prior to the next WP5A meeting.



*Left to right DK4VW, G3PSM, N4QX, LA2RR, VE3QN, Steve UK Delegate, EI3IO, Olga Russian Delegate, Hans Swedish Delegate, Japanese Delegate. Seated is Chairman Dale VK1DSH*



## Excerpts from the HX files

### Pat Fitzpatrick EI2HX - Excerpt 035

Hello and welcome to Xtract 035 of the HX files.

In this article I would like to talk about a portable Amateur TV setup for 23cms (1.2GHz) that is easy to assemble. The ready to go suitcase contains a transmitter/receiver and control circuitry together with a battery for portable operation. All one has to do is erect and connect the antenna to get on air quickly.

The case used was purchased at a rally a couple of years ago and was being used by me just as a storage box for a few odds and ends. The inside was lined with foam as it was originally an instrument case and it had some dividers that could be adjusted to fit the item it was originally built for.



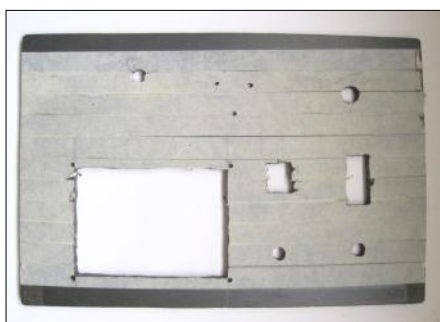
The photo above shows some of the parts, the transmitter and receiver boards, monitor, camera and a few other parts; not in the photo was a 20 watt amp and a 12 volt 7Ah battery. As with all my projects I decided to use whatever parts I had in stock.

A piece from a plastic shop sign that was 1m x 1m x 10mm was used to cut out a panel for the case. The panel was mounted well below the lip of the case, and as the lid of the case is deep a suitable monitor will be mounted there in due course. As the unit would have a fixed camera in place and also a speaker, these items would only have to tilt slightly to allow the case lid to close. Most of the time, however, a camcorder would be the weapon of choice. The panel was cut to size and then it was covered with some masking tape both to protect it and to help with the marking out of the items because



*Photo 4: the completed unit. Top right shows a dummy load connected to the transmitter output, beside that is a "bullet" camera and beneath that to the left is the monitor screen. The kill switch can be seen front centre and to the right the transmit receive switch.*

the plastic was black. The photo below shows the almost completed panel.



From the very start I did not want to put any holes in the case; the only exception to this would be a cut-out in the side of the lid that would allow the lid to close and not cut the coaxial cable and external dc cables. A bracket was fitted to the case that would lock the lid open to prevent it closing heavily on the cables or indeed my fingers.

The fixing of the panel was done by cutting some wood, small box aluminium and treaded bar to size and joining them by using a hot glue gun. The wood was glued and some very small screws used to hold things in place. This was one of the first things done to allow some time to let everything fully cure. Take care not to break through the case body.

A gel battery was placed into position using a couple of small clamps and a strap and then fixed with some screws. A 7Ah gel battery would not last too long when you think of the Tx power requirements, together with lights, camera and monitor usage, but on paper a couple of hours could be achieved.

At a recent rally I bought some handles and a few led strips together with a remote control to illuminate the case. Whilst out and about another PSU could be connected to the unit via the Anderson power poles used in the project. The same connectors could be used not only to power the unit but also to recharge the battery.

As the battery is a fixed feature in the unit and not easy to get to in a hurry, a kill switch was fitted to keep things safe. This is used just in case the unit is accidentally knocked into Tx/Rx mode during transit.

On arrival at the site it is only necessary to assemble a small mast and aerial to get on the air.

That is it for this issue and may all your signals be P5.

73, Pat.





# IRTS 84<sup>th</sup> Annual Weekend & LRC 2016 Radio Rally Review



## Simon Kenny EI7ALB Chairman, Limerick Radio Club

The 84<sup>th</sup> IRTS AGM & Dinner was hosted by Limerick Radio Club in the Radisson Blu Hotel & Spa on the 9<sup>th</sup> and 10<sup>th</sup> April 2016. Workshop Talks were arranged for the Saturday starting at 2pm. Joe Ryan EI7GY kicked off with 'Radio Sport with a focus on Shorter Contests'.

Joe's presentation was followed by Andreas Imse DJ5AR/EI8HH who gave a presentation on 'Using Aircraft Scatter on VHF/USF/SHF'. Andreas gave several examples of his success in using these bands for long distance communications. Steve Wright EI5DD followed with 'NVIS Propagation –Theory and Practice'.

The final workshop item, 'Experimental Amateur Radio using the Radiotelescope in Dwingeloo' was presented by Andreas Imse DJ5AR/EI8HH. The presentation included a video of the removal and restoration of the 25m dish and other works undertaken to restore the telescope.

A live EME link-up was planned between the Radisson Blu Hotel and Dwingeloo in Holland, but unfortunately Mr Murphy of Murphy's Law fame paid a visit so the attempt had to be abandoned.

There was great interest in the workshop talks with each talk attracting in excess of 60 people.

Aidan Noone EI7JC did his usual professional job as MC for the IRTS AGM Dinner. Speakers included IRTS President Gerry Gervin EI8CC and Don Beattie G3BJ President of IARU Region 1. Kieran O'Hanlon, Fianna Fáil councillor for the Metropolitan District of Limerick, representing the Mayor, welcomed all to the area.

Rory Hinchey, representing the Minister for Communications, Energy and Natural Resources, and Derek O'Reilly representing ComReg were guests at the event.

LRC is grateful to Joe Ryan EI7GY who set up the option, on the IRTS web site, which allowed for the purchase of AGM Dinner tickets by using PayPal and to Dave O'Connor EI6AL who managed the transfer of payments to LRC treasurer Tony EI2AW. The system worked very well and no doubt will be used into the future.

Traders and Bring and Buy started to arrive at 8:00am on the Sunday morning for the Limerick Radio Club Rally. Bring and Buy tables were in great demand – luckily most people had pre-ordered tables, otherwise it would have been somewhat chaotic on the morning. A larger than expected crowd attend and a brisk trade was reported on new and used equipment.

LRC wishes to sincerely thank traders; Long Communications and Wescom Ireland Ltd and all those on

the Bring and Buy tables. Thanks to FabLab Limerick who demonstrated 3D printing and to Richard EI8JE of LRC for demonstrating the use of the Helitron DV4 mini USB Stick on D-STAR and Yaesu System Fusion systems.

Thanks to the staff in the Radisson for their professionalism and particularly to Suzanne O'Dwyer, Events Manager, for her positive and can-do attitude.

Not forgetting LRC members who put a huge effort into making the weekend a great success.

We wish our colleagues in DARS every success in planning and hosting the 2017 event.



*'Tickets Please' at entrance to dining room  
John EI6IW Tony EI2AW & Mike EI2IX*



*'Winner Alright' Harry EI2KL wins SOTA Beams Trap  
Mike EI2IX, Harry EI2KL, & John EI6IW*



*Tom EI3AL wins rig  
Tom EI3AL John EI6IW*

# Awards presented at the 2016 AGM

## Pat Conway Perpetual Memorial Trophy

For exceptional service to the Society or Amateur Radio  
**Billy McLoughlin EI7FJ & John Hearne EI2FG**

## The President's Cup

Presented at the discretion of the President - for exceptional service.

**Peter Grant EI4HX**

## Sheila Piper Cup

For service to the IRTS News Service

**Steve Wright EI5DD**

## Kevin Freeny Trophy

For significant experimental work or innovation

**John Breen EI7BV**

## Operating Awards

### IRTS DX Trophy

Leading IRTS Member in the Single Operator sections of the RSGB IOTA contest

**Claus Stehlik EI7JZ**

### Hal Hodgens Trophy

Leading IRTS Member in the 12-hour CW section of the RSGB IOTA contest

**Gerard Scanell EI5KF**

### IRTS IOTA Trophy

Leading island (EJ) DXpedition station in the RSGB IOTA contest

**Papa Lima DX Group EJ1Y**

### EI7IQ National 6 Metre Shield

Leading EI/EJ IRTS member for 6 metre activity in the previous calendar year

**Tom Cocking EI4DQ**

### EI7IQ National 4 Metre Shield

Leading EI/EJ IRTS member for 4 metre activity in the previous calendar year

**Tom Cocking EI4DQ**

### Lough Ree Shield

SSB Portable Section Winter 80m Counties Contest

**Mayo Radio Experimenters Network EI0M/P**

### Lough Allen Shield

SSB Fixed Section Winter 80m Counties Contest

**Pat O'Connor EI9HX**

### Lough Derg Shield

SSB/CW Fixed Section Winter 80m Counties Contest

**David Deane EI9FBB**

### Roseville Cup

SSB/CW Fixed May 40m Counties Contest

**Niall Foley EI4CF**

## EI5AJ Memorial Cup

SSB/CW Fixed Section Summer 80m Counties Contest

**Brian Canning EI8IU**

## Pete Daly Memorial Cup

Leading station in the Open section of IRTS CW Field Day

**Joe Ryan EI7GY/P**

## Paddy Smyth Memorial Cup

Leading station in the Restricted section of the IRTS CW Field Day

**Jeremy Sheehan EI5GM/P**

## Paddy Daly Microphone

Leading station in the Open section of the IRTS SSB Field Day

**Avondhu Radio Club EI1E/P**

## IRTS HF Shield

Leading station in the Restricted section of the IRTS SSB Field Day

**Tim McKnight EI2KA/P**

## Thomond Trophy

Leading station in the Open section of the IRTS VHF/UHF Field Day

**Network South Area REC EI9E/P**

## Shandon Trophy

Leading station in the Restricted section of the IRTS VHF/UHF Field Day

**Denis O'Flaherty EI4KH/P**

## SDR Trophy

Leading station in the 50MHz Restricted section of the IRTS VHF/UHF Field Day

**Avondhu Radio Club EI1E/P**

## Oriel Trophy

Leading station in the 70MHz Restricted section of the IRTS VHF/UHF Field Day

**Gerard Scanell EI5KF/P**

## Slievenamon Shield

Leading station in the 70cm Restricted section of the IRTS VHF/UHF Field Day

**Hans Krauss EI9GRB/P**

## Tom Donnellan Cup

Top IRTS Member in the CW Single-Op section of the CQWW DX contest

**Gerard Scannell EI5KF**

## Dermot Cowley EI2AK Memorial Cup

Leading station in the 23cm Restricted section of the IRTS VHF/UHF Field Day

**Dundalk Amateur Radio Society EI7DAR/P**





## AGM Awards

Photos by

Thos EI2JD

Joe EI7GY





## HF Happenings

### Anthony Murphy EI2KC

#### DQRMer EAHSYL/FBDA identified

A great victory has been struck for those who enjoy amateur radio and in particular for those who want to enjoy HF without having to put up with deliberate QRM (DQRMer). The DQRMer known variously as EAHSYL, EASSYL and FBDA has been located and identified and, thankfully, is now off the air after 13 years of interference, often on DXpeditions to rare entities.

I have written about this individual on several occasions and indeed about the frustration that he has caused to thousands of DXers around the world, some of whom were no doubt prevented from making QSOs because of his shameful behaviour.

Initially direction finding was used. It had long been known that EAHSYL was located at about 120 degrees from the UK, in Italy, Greece or a Balkan country. On 2<sup>nd</sup> October 2014, he was busy causing mayhem on 18.086. Little did he know that a small, ad-hoc investigative group was tracking him down at that moment. This group included a UK-based radio amateur DXer with access to professional DF equipment. As a result of their determination and skill, it was found that various DF headings converged on a point west of Rome, Italy. On 8<sup>th</sup> November 2014, five DF sources pinpointed the same location while he was transmitting on 10.115 MHz.

To properly identify the culprit, some of the amateurs in his area were enlisted to help track him down. They drove to the address of each suspect on the list, one by one, during times of transmission. The receive antenna was just three feet of wire, as it had to be concealed inside the vehicle. The home of one suspect had several large HF transmitting antennas, and when the amateurs arrived at this location the signals were extremely loud. EAHSYL had finally been identified. Interestingly, he had previously “given the game away”, so to speak, when on several occasions over his long years of interference, he accidentally sent his real call sign by mistake on both CW and RTTY.

Shockingly, it transpires that the QRMer was actually a DX hunter, and that he would work the rare DXpeditions first with his own call sign before immediately commencing his DQRMer on the DXpedition's transmit frequency to prevent others from enjoying a QSO.

What's also interesting is that an archive of old DX cluster spots showed that several other DXers had already correctly identified this individual before it was conclusively proved that he was indeed the culprit.

IARU Region 1 representatives wrote to “EAHSYL” informing him that the offending station had been identified in the vicinity of his QTH and asked him for his assistance in identifying the culprit. His reply denied any culpability, but strangely enough the DQRMer ceased from that date.

Many will wonder why it took so long to have this guy identified. It seems his identity had been suspected for quite some time, and he was such a prolific causer of interference and consternation that he should have been tracked down

much sooner. Indeed, there is commercial DF equipment available, manufactured by Rhode & Schwarz, that has been used by naval and marine services to track down offending transmissions in a short time frame. Granted, that equipment is very expensive, but perhaps each country's management of communications services (in our case ComReg) along with the governing bodies in each region (in our case IRTS) might invest in this equipment.

I hate to get political on this issue, but the Italian ARI seems to have been remiss in not silencing this guy sooner. Why is it being left to radio amateurs from the UK and elsewhere to identify the exact location of emissions causing interference that were long known or suspected to emanate from within Italy? We all know of at least one other Italian station who has caused incessant difficulties with QRM on various DX stations over the past number of years. Why hasn't this issue been properly dealt with?

Thankfully, he has not been heard in recent times. Any anyone else thinking about causing QRM on DXpeditions had better think again.

#### Kingman Reef deleted

Since I last wrote, the number of DXCC entities has reduced by one due to the deletion of KH5 Kingman Reef from DXCC by the ARRL Awards Committee. Effective March 29<sup>th</sup>, its deletion reduces the number of DXCC entities to 339. The deletion process is described in DXCC Rules Section thus:

*“An entity may be deleted from the List if it no longer satisfies the criteria under which it was added. However, if the entity continues to meet one or more currently existing rules, it will remain on the List.”*

Kingman Reef's original addition to the DX entity list by virtue of it having a separate administration has changed. Separate administration by the US Navy has been removed. The US Fish and Wildlife Service (F&WS) administers Kingman Reef and Palmyra Island. The reef is too close to Palmyra Island to count as a separate entity. The reef is now considered to be part of the Palmyra/Jarvis DXCC entity. Thankfully, as a result of working the K5P Palmyra DXpedition in January, I do not need this entity! I am, however, disappointed that I won't now get the chance to work Kingman Reef as an independent DXCC entity.

Before deletion, Kingman Reef was the seventh most wanted DX entity. It was last activated in the year 2000, when 15 amateurs operated as K5K over the course of 10 days.

One upside to the deletion of Kingman Reef from the DXCC List is that those of us who dream of getting on the DXCC Honor Roll now have one fewer entity to work. To qualify, your confirmed total must now be at least 330 - within 10 of the total. I have worked 320 DXCC and am working on getting paperwork for a few of those that have not yet been confirmed. Only ten more to work and confirm to achieve Honor Roll. Of course, last ten will be the most difficult.



## Declan EI6FR

I received the following report on recent activities by renowned DXer and DXpeditioner Declan Craig EI6FR: The highlight since the last newsletter was the DXpedition to Juan de Nova. This was one of the last few I needed to complete all DXCCs worked on CW. I last worked Juan de Nova in 1988 when I had a QSO with FR4JA/J on 20m SSB, so a wait of 28 years for a chance to make a CW QSO called for all stops to be taken out with annual leave booked and many hours in the shack anticipated. In the end, the strong signals and high standards of the DXpeditions operators ensured several QSOs for me and many other EIs. So there remains only KH3 and P5 on CW, and hopefully not a 30-year wait for either HI.

I admit to suffering from pile-up fatigue after the extended DXpedition season ending with FT4JA, so lots of time has since been spent enjoying some QRP using mainly an MFJ-9020 at four watts output and an FT817 at a mighty five watts. Bit of JT65 and PSK31 also, which is a nice break from the normal action.

With the 6m season fast approaching and the weather settling down, I got the chance to get up on the fixed tower and wire a new control cable for the G400 so the 6m five-element is turning again. The Force 12 C3's removal and replacement with a hexbeam is next for attention during the summer.

6m has started to open a bit with a couple of very short E openings caught, working the usual European stuff. Thanks to the advice of Tony EI7BMB and Tom EI4DQ, I've become active in the last month on 6m MS (meteor scatter) using JT6M and ISCAT. I was delighted to make my first MS QSO with Tom EI4DQ and have since managed to work several European countries on meteor scatter. I'm looking forward to gaining more experience of the mode and being ready for the bigger showers during the year.

## Recent DX

As a result of having a healthy DXCC count, my level of activity on the HF bands during 2016 has been much reduced. Because of many other commitments, my time spent on radio is less than it was before, although I still make a good effort to work the ATNOs. In the five months of 2016 so far, only two new ones for me have come on air – both at around the same time. These were VK0EK Heard Island and FT4JA Juan de Nova. These had been the fifth and sixth most-wanted DXCC entities.

## VK0EK Heard Island

This DXpedition was fascinating. I'm not sure how you all fared out with VK0EK, but incredibly all my QSOs with them were on the lower bands. My first QSO was on 30m CW on March 27<sup>th</sup>. Heard Island was my 319<sup>th</sup> DXCC worked. The same night, to my utter astonishment, I had them in the log on 80 metres, which I consider to be quite some achievement due to the very compromised nature of my antenna on that band. Heard Island was my 178<sup>th</sup> country worked on 80 metres. I think it might have had something to do with the propagation from that region of the world. There were several nights during which their signals were quite audible from Ireland on 80 metres – sometimes around the time of our sunset, and others at the time of their sunrise. Several EI amateurs worked VK0EK on top band – well done to John EI7BA, Doug EI2CN and Brendan EI6IZ for this

achievement. (Apologies if there are others. VK0EK did not activate the leaderboards feature on Clublog.org, so I don't have a complete list).

My two initial QSOs were followed by contacts on 40m CW and 20m CW. Some of those with bigger antenna systems were able to work VK0EK on the higher bands, with a few QSOs on 12 metres. Top of the pile in terms of slots seems to have been Doug EI2CN on 10, with several others on eight apiece – EI7BA, EI9KC, EI5JQ and EI3KG. Well done to everyone who worked them, and if you made a donation towards the DXpedition, as I did, you will no doubt have received Logbook of the World confirmation from them by now.

## FT4JA Juan de Nova

As VK0EK was getting into full swing, the very rare Juan de Nova island, which is located between Madagascar and the African mainland of Mozambique, came on the air with FT4JA. As is always the case with rare ones, we are all anxious to get an early QSO, just to have it in the log in case for any reason the DXpedition is halted prematurely.

Thankfully, despite the pile-ups, FT4JA proved to be quite workable from this part of the world, and within the space of eight days I managed a total of 11 QSOs. The first of these were on 17m and 20m SSB. I managed a QSO on 30 CW, but none on 40 or 80, but who can complain? I also worked them on 15m RTTY, giving me DXCC #172 on digital modes – a QSO that took just two and a half hours!

Again because FT4JA did not activate the leaderboards feature on Clublog.org, I am unable to give you a definitive top ten list of EI stations who worked them.

## Digital modes

Up until recently, the way I worked my digital modes was a little bit convoluted. I would use HRD v4 for my digital contacts. This meant having to shut down my main logging software, Logger32, because HRD could not read the radio's frequency and mode while Logger32 was still running. So the sequence would be something like this – I close Logger32, open HRD, wait until it connects to the radio, then launch Digital Master 780. I would work the DX (sometimes after a lot of trying HI HI) and then go to the logbook tab, export the QSO in question as an ADIF. Following this I would close DM780 and HRD, and then launch Logger32 again. Finally, I would import the ADIF into Logger32. Long winded, eh? So I started looking at Logger32's own built-in software for digital modes, namely MMVARI. It took me a while to set up macros in it, and for some reason while I was able to set up



individual macros in BPSK31, these weren't available in other modes. So, for instance, I had to repeat the same steps in RTTY, BPSK63, etc.

Despite this hurdle, I was soon up and running and found MMVARI a joy to use, especially on RTTY, where its decode engine seems to have the edge on Digital Master 780. I tested this by running both programs simultaneously and listening to/watching the weaker DX stations. MMVARI has the edge, being able to decode a higher percentage of the weak signals than DM780. The greatest joy, of course, was not having to go through the long-winded procedure described above just to work a station on digi modes.

An immediate boon resulting from this change was that my digital mode count went up. I worked a couple of dozen new ones on digimodes, including the aforementioned FT4JA. At the time of writing, my DXCC count on digital modes is 176. At this juncture I must give special mention to Tony Allen EI4DIB. A while ago, Tony started using digital modes on HF. Using a simple dipole and less than 50 watts, he was soon enjoying making contacts with stations around Europe and beyond. Licensed in 1989, Tony has largely been a VHF proponent during his many years as a radio amateur. He has done a very limited amount of phone work on HF. With digital modes, he seems to have found a real love. He has been active almost every day, and finds PSK to be both relaxing and enjoyable. And he doesn't have to listen to any noise – digi modes can be enjoyed without any volume! Tony runs a popular ham radio blog at <http://ei4dib.blogspot.ie/>. Recently, Tony has also helped a number of other radio amateurs in his local area to get up and running on digital modes – so expect plenty of PSK emissions from the Louth and Meath area in the coming months!

#### Other DX

My activity since the big DXpeditions (VK0EK and FT4JA) has been limited. Two of note were the EP2A activation of Iran in April, and the brief A91HI operation at the end of that month. The latter activation of a new IOTA, Hawar Islands AS-202, featured two well-known EIs, Jeremy EI5GM and Dave EI9FBB. I had the pleasure of a 20m SSB QSO with Jeremy. I managed six QSOs with the EP2A. One of these was on 30m, which was a new band for me. I failed to work them on 40 or 80m, that's for the future!

#### EI9FBB

On the subject of Dave Deane EI9FBB, I have to say hearty congratulations to him on achieving his place on the DXCC Honor Roll. That's a fantastic achievement and one of which he should be proud. And it only took 11 years. I know that might sound like a long time to some, but that is an achievement that takes huge time, dedication and effort.

#### EJ7NET

Just a quick note to say that I will be joining the Westnet DX group (EJ7NET) on its next IOTA activation to Tory Island, Co Donegal, in early June. We aim to arrive on Tory on Saturday June 11<sup>th</sup>, and hope to have at least one station on the air by that evening. We will be there until Wednesday 15<sup>th</sup>. We will operate on phone, CW, and digital modes. This year, we will have at least one station dedicated to digital modes, and will, as usual, make a concerted effort to operate on 6m. I look forward to trying to put you in the log. I hope to report on this trip in the next issue.

#### EI7HCB

Heartiest congratulations to Jarek EI7HCB on getting his licence. Jarek has been a member of the Dundalk Amateur Radio Society for the past couple of years as a shortwave listener, and is now active as EI7HCB.

#### 5A1AL approved for DXCC

Since my last article, it has been confirmed by the ARRL DX Desk that all operations by 5A1AL from Libya have been approved for DXCC purposes. I had four QSOs with Abubaker in 2013. He is the only one I've ever worked in Libya, so I need the DXCC and will now QSL with him.

#### Forthcoming DX

##### 5W Samoa

Tom, KC0W (recently active as KH8/KC0W) will be QRV from Samoa starting around June 15, 2016. Active as 5W0COW on HF bands, CW only. QSL via H/c, direct.

##### VP2V British Virgin Islands

Kevin K6TOP will again be active from B.V.I as VP2V/K6TOP between May 27 to June 15, 2016. QRV on 40-10m CW, spare time. QSL via LoTW.

##### CY9C St. Paul Island

Eleven operators will activate St. Paul Island using the call sign CY9C from August 19<sup>th</sup> to 29<sup>th</sup>. They will operate from two different sites, and will use phone, CW and RTTY and will even have 2m EME, satellite and 6m operations. More information is available on their website at [www.cy9dexpedition.com](http://www.cy9dexpedition.com).

##### ZL7G Chatham Island

The "6G" team that operated from TX6G (Australis – 2014) and E6GG (Niue – 2015) will be on Chatham Island from 27 October to 10 November 2016. The location has excellent short and long path take-off towards Europe where ZL7 is still high on the wanted list. As in previous expeditions, operation will be 160-10m CW, SSB and RTTY, with up to four stations active at any one time.

##### S9 Sao Tome

Josep, EA3BT and Nuria, EA3WL will be active from Ilheu das Rolas (Sao Tome, AF-023) as S9BT and S9WL between September 26 to October 1, 2016. They will be QRV on 40-6m, SSB and some CW/RTTY. QSL both calls via EA3BT, OQRS.

##### J5 Guinea Bissau

The Italian DX Team is planning to activate Bijagos Archipalego (AF-020) in November. [www.i2ysb.com](http://www.i2ysb.com).

##### T31 Central Kiribati

Watch out for one of the "big ones" in 2017 when Central Kiribati will be on air. The Perseverance DX Group ([pdxg.net](http://pdxg.net)) commenced planning next year's DXpedition to Central Kiribati (Kanton Island) T31. The call sign T31W was issued for team use. Exact dates have not been selected, but the plan is for October. [t31w.com](http://t31w.com). Please direct questions to Gene K5GS or Pista HA5AO at their QRZ.com address.

That's it for now folks. Thanks for reading, and as always your feedback is welcome [hamradioireland@gmail.com](mailto:hamradioireland@gmail.com). Slán go foil and enjoy the summer.





# Irish Radio Transmitters Society

## Annual General Meeting

**Radisson Blu Hotel, Limerick, 10 April 2016**



### Committee Meetings

Seven committee meetings were held during the year.

### Membership

Membership numbers showed an increase in the year January/December 2015, from a total of 921 at the beginning of the year to 935 at year end. This is a satisfying result as membership numbers had been steadily reducing over the previous years. The increase was partially due to an increase in the numbers of new members compared with the previous year along with a reduction in lapsed membership over the same period. During the year a percentage of members who had left the society but were still active were contacted. As a result, a number of them re-joined the Society. Further lapsed members will be contacted over the coming months.

### Contests

There is a very active contest community in Ireland, regularly entering local and international contests, and often achieving excellent results. To provide a local platform for contesters and to encourage our members to become involved in contesting and improve their operating skills, IRTS runs a number of Field Day contests as well as short HF and VHF Counties Contests. Almost 70 members submitted logs for one or more of these contests during 2015, as did 20 non-members living outside EI. Some rule changes were made during the year, following consultation with contesters: these changes included the introduction of a new 6 hour section for the HF Field Days. Another change, designed to encourage more activity at the CW end of the band in the HF Counties Contests, saw the introduction of a final score bonus to be added to any entry that includes at least 10 valid QSOs with EI or GI stations; also, CW "centre of activity" frequencies were suggested for these contests. Other changes, which included the simplification of rules, were also made.

### ComReg

The Commission for Communications Regulation (ComReg) is the statutory authority responsible for all licensing functions (other than those relating to Television) under the relevant legislation. Regular contact is maintained with ComReg by the Society. Usually one meeting is held annually with representatives of ComReg to discuss matters concerning amateur radio. A good working relationship exists between the Society and the Licensing and Frequency Management sections of the Commission.

**Possible Amendments to CEPT Recommendation T/R 61-02:** We were consulted by ComReg about discussions within CEPT about amending the section of this Recommendation which deals with the HAREC syllabus. The changes being discussed related to the sections dealing with 'Social Responsibility of Radio Amateur Operation' and 'Operating Procedures'. The amendments under discussion are very specific and draw on the IARU document 'Ethics and Operating Procedures for Radio Amateurs'. We replied to the effect that we would not see a difficulty in incorporating the topics concerned into the exam syllabus but suggested the following two more general syllabus headings be used than the more detailed ones being proposed

*"Ethically appropriate on-air conduct by radio amateurs – based on the principles set out in the IARU document "Ethics and Operating Procedures for the Radio Amateur"*

*"Radio amateur operating procedures – based on the principles set out in the IARU document "Ethics and Operating Procedures for the Radio Amateur"*

**Novice Licence:** An outline proposal for the introduction of a Novice Licence was submitted towards the end of last year. The proposal was that the licence would be on the lines of the CEPT Novice Licence set out in ECC Recommendation (05)06 and ERC Report 32. The latter document sets out the syllabus for the CEPT Novice Licence. The novice Licence has been implemented by twenty four CEPT Administrations so far.

**Draft Radio Spectrum Strategy 2016 to 2018:** This document (ComReg Document 15/131) was published on 14 December 2015. In the Radio Spectrum Work Plan for 2016 – 2018 the following two matters are identified at paragraph 6.2.9 as work plan items for the amateur radio service:

Consider a possible new allocation to the amateur service on a secondary basis in the band 5351.5 – 5366.5 kHz in line with the outcome of agenda item 1.4 of WRC-15; and

Consider additional spectrum allocations to the amateur services in the bands 30 – 49 MHz and 52 – 70.5 MHz to facilitate propagation beacons, digital amateur television repeaters and align current allocations with those in the European Common Allocation Table.

A lengthy response to this document was submitted on 23 January 2016. This included a request for early release of the of the new 5 MHz band mentioned above together with alignment with any other frequency allocations that may eventually be made to the amateur service in the UK in the band 5250-5450 kHz.

A summary from our submission of what we would like to see achieved within the period of the Strategy together with a table setting out the high, medium and low priority issues for the Society was published in the March 2016 edition of Echo Ireland.

It is worth noting that Spain and Belgium have already released the new 5 MHz band and the Netherlands has released a band of 100 kHz at 5350-5450 kHz with a power of 100 watts PEP.

**Automatic Station Coordination Group:** Under a long standing arrangement with ComReg, requests for automatic stations are referred through the Society to this group which operates by email and comprises most of the repeater/beacon keepers in the country. The Committee wishes to record its thanks to them for their co-operation and to John McCarthy EI8JA who coordinates the work of the group. It is of benefit to the amateur community that there is a system of consultation on applications for automatic stations. The Committee takes this opportunity to thank the officials in ComReg for their assistance to and cooperation with the Society during the year.

**Department of Communications, Energy and Natural Resources (DCENR) and the Military Authorities:** Separate meetings were held on 22 April and 8 July 2015 with officials of DCENR and the Military. The primary purpose of these meetings was to try to secure support for the IARU position on a 100 kHz band at 5 MHz and some other matters on the WRC-15 Agenda as well as alignment of our 5 MHz allocations with those of the UK. The question of participation by IRTS in Conference Preparatory Groups for CEPT and WRC meetings and membership of Irish Delegations to Conferences at no cost to the state were raised with DCENR. The Department explained its difficulty with these two issues. Relevant position papers were presented in advance of these meetings.

### International Amateur Radio Union (IARU)

At international level, National Societies throughout the world work together for the overall good of Amateur Radio under the auspices of a representative democracy, the International Amateur Radio Union – IARU. It is through the work of the IARU that radio amateurs, by devising agreed objectives and developing unified strategies, have achieved the various improvements in frequency allocations at WRCs over the years. A small part of each member's annual subscription goes to help fund the work of the IARU. All who have the best interests of amateur radio at heart should be members of their National Society and contribute to and support the work of the IARU. Being a paid up member of your national Society is the only way you can give practical support to the work of the Union and so help to secure the future of amateur radio. Like any other Union, the IARU works for the good of its members – the radio amateurs of the world. For many years now the Society had maintained a designated fund to allow the IRTS to be represented by two delegates at the three yearly Conferences of Region 1 IARU and a small part of the subscription income of the society is lodged to this fund each year.

**Annual IRTS Dinner:** We were very pleased to have Tim Ellam VE6SH, International President IARU and Don Beattie G3BJ, President IARU Region 1 as guests at the dinner in Kilkenny on 25 April. They both spoke in very complementary terms about the role of IRTS both nationally and within the IARU.

**European Common Allocations Table:** The revised Table was published in early July 2015 and included a new provision for a secondary allocation to the amateur service in the band 69.9-70.5 MHz. This resulted from an earlier initiative by ComReg/IRTS which succeeded in getting Footnote EU9 about 70 MHz added to the Table. This success was then built on by IARU Region 1 in which Dave EI3IO played a major role in bringing about the new provision for the 70 MHz secondary allocation.

**Friedrichshafen:** A Meeting of IARU Member Societies was held on the Friday afternoon. Its purpose was to get across to Member Societies their responsibilities in relation to interaction with their Regulators/Spectrum Policymakers and their obligation to promote IARU policy objectives. The IRTS, at the request of the IARU Region 1 President, prepared and presented a short section of the overall presentation for the meeting as an example of what can be done by a 'successfully operating' smaller National Society. The presentation was very well received.

**Coordination of Satellite Frequencies:** The two-metre amateur band is one of the most popular and populated bands in all the spectrum allocated to the amateur and amateur satellite services. This recently led to a request by satellite builders for coordination outside the spectrum reserved for satellites in the IARU band plans (145,800 – 146,000 MHz) as not enough channels are available to satisfy their requirements.

The IARU Satellite Adviser, Hans van de Groenendaal, ZS6AKV and his advisory panel are mandated to coordinate frequencies within the IARU band plans for amateur satellites. Coordinated frequencies must comply with band plans that are common to all three IARU Regions.

**Second Societies:** In early October the IARU Member Society Relations Project Team reported to the Administrative Council on its work so far on dealing with the issue of second societies. The Administrative Council decided that the next step would be to draft possible revisions to the IARU Constitution to introduce some degree of flexibility in dealing with second societies. Any revisions would require approval of the IARU Member Societies. The Society wrote to the Administrative Council urging caution in this matter. The issue arose mainly in relation to countries where the IARU Society is not carrying out its responsibilities and a second, sometimes more active society, exists.

**Non-Member QSLs:** QSL sub managers were reminded that the Society provides a QSL service to non-members provided they agree to pay the full cost of the service. This practice is in accordance with Resolution 85-9. The reminder arose from the fact that the European Radio Amateurs' Organisation (EURAO), a self-styled 'alternative IARU' uses the fact that some IARU Societies do not provide a QSL service for non-members as one of the justifications for its existence.

**WRC-15 - Allocation at 5 MHz:** At WRC-15 on 18 November a new allocation at 5 MHz was approved for the Amateur service. The new allocation is for 15 kHz between 5351.5 and 5366.5 kHz and a power limit of 15 watts eirp applies. The change is to take effect from 1 January 2017. The smaller-than-hoped-for size of this allocation, the unusual band edges and the modest power limits reflect the difficult compromise resulting from the long negotiations. Given that both the US and Russia were committed to "no change" along with a couple of dozen other countries, the outcome though modest was against the odds. As mentioned above the Society has sought an early release of the band.

**Vienna Meeting:** An interim meeting of the Region 1 Committees C4 (HF), C5 (VHF/UHF) and C7 (EMC) will take place in Vienna on 15-17 April. The Society will be represented at this meeting by Dave Court EI3IO and Brendan Minish EI6IZ.

**NATO:** NATO has some proposals for additional allocations at HF that may involve proposals for some use of our exclusive amateur service allocations. The proposals document has not been released as yet by NATO. The IARU is watching the position very closely.

**IARU Membership:** During the year IRTS voted in favour of the admission of the Society in Kosovo to membership of the IARU.

**IARU Liaison:** Since Dave Court EI3IO is a member of the IARU Region 1 Executive Committee and as he has, among other things, responsibility for liaison with a number of countries including Ireland he is very involved and up to date on IARU Region 1 affairs. In addition, from his professional experience, he is very familiar with CEPT and ITU documentation and procedures. Accordingly, the Committee decided on the recommendation of Seán Nolan EI7CD (who had responsibility for IARU Liaison) the Dave EI3IO should assume the IARU Liaison role and also that of HF Manager.

There is a very interesting article on IARU affairs by Dave EI3IO in the March edition of Echo Ireland.

### Amateur Station Licence Examination

The current agreement under which IRTS is responsible for setting, organising and correcting this examination runs until December 2016. Since the last AGM two examinations were held in June and November 2015 and a total of thirty one candidates sat these examinations. Since IRTS took over responsibility for administering the examination eleven years ago, twenty two examinations have been held, 384 candidates (including repeats) have sat these examinations and 246 have gained the HAREC qualification.

**Course Guide:** In mid 2014 the Course Guide for the amateur station licence examination was extended to include additional pages covering both the "Licensing Conditions" and the "Operating Rules and Procedures" sections of the course. The course guide is at [www.irts.ie/course](http://www.irts.ie/course) and there is a zip file for off line use available at [www.irts.ie/downloads](http://www.irts.ie/downloads). The document "Studying for the Harmonised Amateur Radio Examination" is also available on the downloads page. This document includes the syllabus, sample paper and reports published by the Examinations Board.

### Radio News

The Radio News service is running well at present with indications of increasing interest in the two HF Sunday news transmissions. The Society is still seeking HF newsreaders as this service at present depends on three newsreaders. The News is also broadcast by clubs on VHF from various locations throughout the country on Sunday and on Sunday, Monday and Tuesday evenings. We wish to particularly thank Aidan Noone EI7JC who continues to produce interesting and informative news scripts week in week out. Finally we pay tribute to the dedication and commitment of the newsreaders who give of their time to bring us the Radio News Service throughout the year.

### Awards

The society is called on each year to validate a small number of applications by members for awards granted by other IARU Societies. The Society's trophies, which are awarded for contests, construction as well as for services to the Society or to Amateur Radio, will be presented in the course of the AGM.

### QSL Bureau

The QSL cards are distributed by a dedicated team of members on a regular basis. From an initial sort by Michael EI2CL the cards are picked up by Pat EI2HX and brought to the IRTS committee meetings and handed over to the attending QSL managers. Those not at the meeting will receive them in the post later that week so they can be sorted out and get to you as quickly as possible. On the subject of postage, with the cost of postage as ever going up, it was noted by the QSL Managers that 5 cards could be sent for the same price as a single card. If there are only a couple of cards for you this time the manager will hold onto them and add them to the cards that arrive the next time, if there are none to add then what we have for you will then be sent to you.

**You and your cards:** On the subject of you, do the QSL Managers have your details? Some members may have changed their call sign over time, be it from a 3 letter to a 2 letter call sign, have come back to the hobby, (and having to get a new call sign) and if you are in charge of a special event or club call sign, do please let the QSL manager for that call sign's number know who to send it to, as not all QSL cards come back with "VIA EI ????" on them. So let us know so that you get YOUR cards. Your qsl manager's details are, as always, on page 2 of the Echo Ireland, so let YOUR current manager and even YOUR previous call sign manager know where to send them, as the other station may take months to send out their cards. It has been noticed by some managers that some qsl cards arrive many years after the qso, this is not that the qsl card has been lost in the various bureaus, but someone has got a new computer logging programme and he has simply just stuck a sticker on a blank QSL card. You can bring your cards for EI to the rallies and hand them in at the IRTS stand, but all non-EIs must be sent to our outgoing manager, details of which are found on page 2 of Echo Ireland and on the society's web pages. The outgoing committee would like to thank all the QSL Managers for their service in getting the QSL cards to their final destination.

### AREN (Amateur Radio Emergency Network)

In January, Conor, EI4JN, attended a familiarisation and training event with An Garda Síochána in the control room in Anglesea street station in Cork City. This training was run under the Framework for Emergency Management in Ireland. Spring commenced with Tim, EI2KA attending Information Management Training under the Major Emergency Management



program. Galway VHF group were active in February, March and April supporting their long-standing events, which included the Galway "Head of the River", and Connemara Ultra Marathons. The group is well practiced at these events and indeed today (10<sup>th</sup> April 2016) as this report is being published. Group members are active at a public service event. In early April Tim, EI2KA and John, EI2GN attended the next round of Emergency Management training again in Anglesea street station.

Over the weekend of the 18<sup>th</sup> and 19<sup>th</sup> of April, AREN members had a meeting in Dromineer County Tipperary where a mix of theory and practical activities were demonstrated including voice and digital message handling (Winlink, Fldigi/NBEMS), navigation skills and also some Emergency Communications 'go-kits' were demonstrated. Declan EI2GE, of the [Lough Derg House & Lake Cafe](#) hosted AREN by providing accommodation. Denis Dillon of [Shannon Sailing](#) provided the training facilities, Richard Cullinane, EI8JE assisted with the preparation of an exercise on Sunday Morning and the loan of equipment.

At the IRTS AGM over the weekend of the 25<sup>th</sup> and 26<sup>th</sup> of April, Grep Mossop, G0DUB IARU Region 1, emergency communications co-ordinator presented and the IRTS AGM and also John, EI7IG was able to get some time with him for some wide-ranging discussions on Public Service and Emergency Communications. In May, Ger, EI4GXB participated in a Limerick area, Voluntary Emergency Services familiarisation session. On May 9<sup>th</sup> Kerry Mountain Rescue Team hosted a Multi-agency Exercise at Torc Mountain, Killarney, Co. Kerry. This exercise was all about how multiple voluntary agencies would work together on a large scale event. AREN involvement made quite an impression on the other services on-site. The AREN station had lots of visitors. Messages were passed in and out of on-site effectively. AREN achieved what we set out to do and learned a lot in the process.

EI4JN was on-site with EI7IG acting as rear-control, EI2KA as net control, and EI2HIB and EI5HBB as substations. On June the 25<sup>th</sup> AREN was invited to a Civic Reception for all the Voluntary Emergency Services. Tim, EI2KA attended on AREN's behalf and AREN was thanked by the Mayor of County Cork for "commitment and professionalism" in service of the community. In July AREN was invited to participate as an observer at the Command Post for the Ring of Kerry cycle event. This was attended by EI4JN. At the end of August. AREN was once again present at the Sean Kelly Tour cycle event where inter-organisation communications was provided along with APRS tracking for the 'tail-end' of the three separate events that take place during the day.

In December, Ger EI4GXB, was active in his local community of Clonlara. Co. Clare, with a group of amateur radio operators doing door-to-door checks in areas affected by flooding.

By the end of 2015 approximately 60% of our Members have completed the initial on-line Major Emergency Management training. Along with this, and as a direct result of Served Agency feedback, we are working on improving our Logistical Digital communications capability through the use of digital modes on HF. Throughout 2015, approximately 700 hours were directly spent by members on public service activities. This does not include the time spent preparing for events, training or meeting with served agencies. Many thanks to all members for donating their time and expertise to public service.

Anyone interested in what AREN does should feel free to contact John Ronan, EI7IG ([ei7ig@aren.ie](mailto:ei7ig@aren.ie)) or via the contact details on the IRTS website.

## EMC

We are beginning to see Solar PV systems being deployed in new housing projects in Ireland, based on experiences from other national societies we can expect some issues in a minority of installations; however where good installation practices are followed there should be few issues.

During the past 12 months a number of members have made contact with the EMC officer with regard to Interference to HF reception. As EMC officer, I would appeal to the members to report back on how their EMC issues were resolved, we can all learn from the outcomes of others. There have two cases this year involving VDSL. VDSL or fibre to the cabinet utilities the HF spectrum up to 17.668 MHz. There is potential for interference to HF radio in areas where the copper phone line balance is poor. I have had one case involving VDSL causing issues to the HF amateur bands and we worked with Eir to have the issue resolved. Eir were unable to fully address the multiple line imbalance issues in the vicinity of the Amateur station but were able to exclude the HF amateur bands from the spectrum mask in use by the cabinet in the vicinity of the victim. It is also worth noting that Eir also suffer with EMC issues from consumer devices and have been proactive about involving the regulator where required. I would like to compliment Eir for their willingness to work with the IRTS EMC officer towards a solution.

There was also a case of interference to VDSL from HF operation, this was eventually traced to poor RF immunity of the PSU supplied with the VDSL modem, replacing the PSU with a unit that had better RF immunity resolved the issue. Our findings were reported back to the VDSL provider. The Irish VDSL rollout is now largely complete and the focus by both Eir and SIRO (ESB Vodafone joint venture Company) is now on deploying Fibre to the home. With this infrastructure the service is brought into the home on an optical fibre instead of the legacy copper network, thus the risk of impact to radio users is much reduced since optical fibre is nonconductive and does not carry or have the potential to emit RF.

There was a case this year of considerable interference from a CCTV system. In this case the original PSU had failed after a number of years of problem-free use and was replaced with a substandard unit. The CCTV wiring and the mains wiring were radiating the PSU noise over a wide area. This was resolved by replacing the PSUs with a linear PSU.

There is one open case, which involves significant interference to 80m from an internal Business phone system located in the vicinity of an Amateur. Efforts are ongoing to get this matter resolved. One report of power-line noise was received this year and I advised on how to proceed with locating and reporting the issue to ESB. I did not hear back on the outcome but in general the ESB have proved very good at addressing issues once they have been located accurately. The ESB have to date demonstrated willingness to resolve issues however it's important to first ascertain beyond reasonable doubt that the interference source is ESB property before involving the ESB in the resolution process and I would ask that contact be made with me as EMC officer before a report is made to the ESB.

## IARUMS

The IARU Monitoring System is the intruder watch organisation of the International Amateur Radio Union. Its tasks are observing the amateur radio bands for illegal intruders to protect and defend our bands. After identification of the intruders reports are sent to the relevant state authorities who introduce steps to remove these intruders. Monitors are stationed around the globe in many countries and watch the bands on a regular basis. Ireland has participated in the IARUMS for a good number of years now. Reports are sent to HQ in Germany at the end of each month, showing the latest intruders heard in Ireland. The IRTS also takes part in the intruder watch email reflector system for a quick response in a clear and present band intrusion.

Typical intruders observed in Ireland are Over the Horizon Radar stations from Russia, China, Iran and Cyprus; digital communication from armies of several states, taxi communication from Russia and former Soviet states; fishermen in Europe or Asia; broadcasting stations. The present IRTS IARUMS officer is Michael Foertig EI3GYB, who was appointed to the post in December 2015.

## Publications

During 2015 there were four editions of Echo Ireland, which published quarterly, in March, June, September and December. There were 12 issues of the EiNews electronic newsletter which is published on the first of each month and emailed to in excess of 700 subscribers. Aidan EI7JC and Steve EI5DD editors would like to record their thanks to all who contribute articles, to the many club rapporteurs and to Paul EI5DI and Dave EI8KG who work in the background on quality control.

## Youth

The annual YOTA month took place in December 2015. EI0YOTA was aired by Ger EI4GXB, Aaron EI6HTB and James Canning assisted his Dad Brian EI8IU. Over 2000 QSOs were made during the month. The 2016 YOTA camp will be held in Wagrain, Austria.

## Committee Nominations

The following are the Committee's nominations for 2016/2017

<b>President:</b>	Gerry Gervin EI8CC
<b>Vice-President:</b>	Jim Holohan EI4HH
<b>Committee:</b>	John Owen-Jones EI1EM Pat Fitzpatrick EI2HX Dave Court EI3IO Seán Donelan EI4GK Steve Wright EI5DD Paul Barlow EI5KI Dave O'Connor EI6AL Brendan Minish EI6IZ Anthony Dolan EI6GGB Larry McGriskin EI9CN Pat O'Connor EI9HX

Ger McNamara EI4GXB  
IRTS Hon. Secretary.

# Irish Radio Transmitters Society

## Treasurer's report for the year to 31st December 2015 to the Annual General Meeting Radisson Blu Hotel, Limerick - Sunday 10th April 2016

I have pleasure in presenting the Accounts for the year 2015 for approval.

The Income and Expenditure account shows a surplus of €1,142 at year-end. This figure is slightly lower than the figure for 2014. This reflects the cost of attendance at YOTA in 2015 (there was no YOTA cost incurred in 2014), partially offset by savings in other areas.

The Subscription total remains virtually unchanged compared with 2014.

Postage costs show a reduction for the year. This again reflects the increasing use of Paypal. There has also been a significant increase in the use of emails as a route for reminding members of subscriptions due, rather than sending written reminders. Postal reminders are now only sent where members have not advised an email address or where emails have not resulted in payment. This has also led to a significant reduction in stationary costs. The increase in QSL costs reflects the high volume of cards generated by special calls issued to the Society in 2014/15.

During the year a number of bequests were made to the Society. Sales of equipment as a result generated in excess of €6,000. This appears in the balance sheet as a Donations Fund, ring-fenced solely for use as a contingency fund to cover exceptional requests made to the society for assistance.

The Promoting Amateur Radio fund that was established prior to this financial year remains at almost €5000. No requests were received during the year for grants from this fund. The fund is there for use in any activity that would bring to the attention of the general public the field of Amateur Radio and I would appeal to clubs to actively explore any ideas that would qualify for payments under this grant.

During the year the Society agreed to absorb the AREN accounts in to the IRTS accounts. The year end and accumulated balance for AREN will be shown as a note to the IRTS balance sheet at yearend.

In summary, the Society remains in a healthy financial position going in to 2016. Again I would thank those members who opted for electronic payment in 2015 and also to those members who were prompt in paying their subscriptions. The savings generated mean we can continue to offer the same service to our members whilst keeping subscriptions at their current level. This is particularly important as there are an increasing number of subscriptions moving from full to discretionary each year.

Thanks again to our auditors Brendan de hÓra EI3GV and to Brendan Lynch EI6GA who did a thorough job in checking the accounts prior to signing them off.

*Dave O'Connor EI6AL, Hon. Treasurer*

## Balance Sheet as at 31<sup>st</sup> December 2015

	2014	2015
<b>Fixed Assets</b>		
Equipment	0	0
Prize Bonds	89	89
Irish Life & Permanent Shares	0	0
<b>Current Assets</b>		
Stock for Re-sale	642	513
Cash on Deposit	46,733	46,988
Cash in Bank	9,165	19,290
<b>Total Assets</b>	<b>56,629</b>	<b>66,880</b>
<b>Total Liabilities</b>	<b>0</b>	<b>0</b>
<b>Surplus Assets over Liabilities</b>	<b>56,629</b>	<b>66,880</b>
<b>Represented by</b>		
General Reserve	48,289	49,431
Call Book Reserve	0	3,200
IARU Conference Reserve	3,406	3,202
Promoting Amateur Radio Fund	4,934	4,934
Donations Fund		6,113
	<b>56,629</b>	<b>66,880</b>

*Signed: Dave O'Connor EI6AL, Hon. Treasurer*



# Irish Radio Transmitters Society

## Income and Expenditure Account for the Year to 31<sup>st</sup> December 2015

Income €	2014	2015
Subscriptions	23275	23610
Donations	123	1054
PAR Fund	595	0
Advertising	400	75
Book and CD Sales	-206	-40
Interest & Currency Gain/Loss	815	246
Exam fee and Morse Tests	1254	1080
EI150ITU / EI90IARU	103	163
AREN	0	768
Other Income	0	1331
<b>Total Income €</b>	<b>26,749</b>	<b>28,287</b>
<b>Expenditure €</b>		
Echo Ireland Printing	6363	6409
Echo Ireland Postage	4111	4840
Callbook (accrual)	1830	3200
Postage	1076	856
QSL Outgoing	575	1200
QSL Incoming	1448	2095
Paypal Commissions	499	582
Insurance	681	706
Committee Meetings Room Hire	960	899
Stationary	741	71
AGM Costs	240	837
IARU Dues	1108	1108
Licence Fees	100	60
IARU Convention Reserve	1250	-204
Bank Charges	725	422
Trophies Etc	755	994
Website Costs	385	422
Donations	0	-250
AREN	0	450
Comreg	331	305
PAR Fund	595	0
Exceptional Items	1234	593
YOTA	0	1251
Miscellaneous	160	300
<b>Total Expenditure €</b>	<b>25,166</b>	<b>27,145</b>
<b>Net Income/Deficit for Year €</b>	<b>1,582</b>	<b>1,142</b>

## Notes on, and forming part of the Accounts for the year ended 31<sup>st</sup> December 2015

### Income

Subscriptions and Income received during the year were treated as cash received and credited to the income and expenditure account. No provision was made for subscriptions in arrears. No provision was made for treating subscriptions falling after 31<sup>st</sup> December as prepayments.

### General Reserve

Balance as at 1 <sup>st</sup> January 2015	€ 48,289
Surplus at 31 <sup>st</sup> December	€ 1,142
General Reserve carried forward	<b>€ 49,431</b>

### IARU Conference Reserve

Balance at 1 <sup>st</sup> January 2015	€ 3406
Transferred from general reserve	€ 1,796
Transferred to callbook reserve	€ 2,000
Total reserve 31 <sup>st</sup> Dec	<b>€ 3,202</b>

### Callbook Reserve

Balance at 1 <sup>st</sup> January 2015	€ Nil
Transferred from general reserve	€ 1,200
Transferred from IARU reserve	€ 2,000
Total reserve 31 <sup>st</sup> Dec	<b>€ 3,200</b>

### PAR Fund

Balance on 1 <sup>st</sup> Jan 2015	€ 4,934
Balance on 31 <sup>st</sup> Dec	<b>€ 4,934</b>

### Donations Fund

Balance on 1 <sup>st</sup> Jan 2015	€ Nil
Balance on 31 <sup>st</sup> Dec	<b>€ 6,113</b>

### Cash on Deposit

Balance on 1 <sup>st</sup> Jan 2015	€ 46,733
Balance on 31 <sup>st</sup> Dec	<b>€ 46,988</b>

### Balance AREN

Balance on 1 <sup>st</sup> Jan 2015	€ Nil
Balance on 31 <sup>st</sup> Dec	<b>€ 318</b>
(this surplus included in general reserve)	

## Auditors Report for year ended December 31<sup>st</sup> 2015

*We, the undersigned, acting as Honorary Auditors of the Irish Radio Transmitters Society, have compared the foregoing Income and Expenditure Account, Balance Sheet and Notes thereon, with the books and vouchers of the Society and certify that they are correct and in accordance with them.*

*Signed:*

*Brendan M. de hÓra EI3GV*

*Brendan Lynch EI6GA*

*16th March 2016*



# Contest News

Joe Ryan EI7GY

[contestmanager@irts.ie](mailto:contestmanager@irts.ie)

## IRTS Contest Results

We have the results of two IRTS contests to report on in this issue, firstly our inaugural 80 Metres Evening Counties Contest, held on 9th February. This was an SSB-only event, and we were fortunate that band conditions on 80m were good on the night, with decent short-range propagation and a low noise level. (I know from participating in 80m evening contests over many years that early evening local propagation on this band is unpredictable.) 23 EI/GI counties were active in the contest, and 37 station logs were submitted, including 9 from overseas, a satisfactory outcome for the society's first venture into short evening contests. Quite a few stations vied for top spot – 7 stations managed over 40 QSOs in the hour – but Paul EI2CA managed to edge ahead of Seán EI7CD to get the EI/GI award; David 2E0KVJ gets the Outside EI/GI award. The CW version of this contest is scheduled for early November.

IRTS has been running 2 Metres Counties Contests for many years, one on Easter Monday, the other in late August. The Easter contest has always been the most popular of the two, and this year there were more than 80 EI and GI stations, from 29 counties, active on the day; the 3 counties not in any log were Cavan, Longford and Roscommon. 25 stations and one SWL submitted logs. There was little DX worked on the day, most QSOs were with nearby counties; just two overseas stations (both GW) appeared in the logs. Not surprisingly, the portable stations fared best with county multipliers – Noel EI5HIB/P with 15 multipliers, and David EI7GEB/P with 14 multipliers.

Section winners for both contests are shown in the table overleaf, together with photos of some of the action in the 2 Metres contest.

## Contest Rules

There were a number of changes to the contest rules in 2015, mostly in response to issues that had arisen or to clarify some point or other. One of the changes made was to move the Site & Power Supply rules – designed in the first place for Field Day contests – from the General Rules to the respective Field Day rules. Having made the change, I neglected to update the cross-reference in the 2 Metres Counties portable section rules to take account of the change. To remedy this, the 2 Metres Counties rules have been updated by the inclusion of a new “Requirements for Portable Section Entries” section. A similar change has been made to the HF Counties rules. These updates don't involve any rule changes, but they do make the requirements for Portable Section entries more conspicuous.

I have added two new points to the General Rules, which are self-explanatory, and extended an existing rule, Rule 4.1, relating to the format of submitted logs.

4.1 has been extended to ensure that logs containing more than 100 QSOs will be submitted electronically and in Cabrillo format: in practice this will not affect most Counties Contest log submissions, as it is generally only in Field Days

that QSO numbers exceed 100. Since taking on the job of contest manager I have, thankfully, never received a paper log with more than 100 QSOs. For checking purposes, logs received are now entered into a QSO database, a simple job with Cabrillo and other text-file logs, but not so simple with paper logs!

<b>4.9</b> (added)	Audio recordings made by the entrant or a third party will not be accepted for use in the cross-checking or scoring process.
<b>5.11</b> (added)	Contacts made using repeaters, satellites, aircraft scatter or moon bounce will not count for points.
<b>4.1</b> (extended)	Submitted logs must be clearly written or printed, or sent by email as text files in a columnar format, with all the data for each individual QSO on one line (only); files that can readily be converted to this format (e.g. Excel files) are also accepted. Logs containing more than 100 QSOs must be in Cabrillo format and submitted by email, unless otherwise agreed in advance by the Contest Manager.

## Other Contest Results

In the March issue we featured Peter EI7CC, who was the leading EI station in the single-operator low power unassisted 12-hour section of the UKEICC SSB DX Contest. Well, Peter did it again in the CW leg of this contest at the end of January, and has been presented with the IRTS-sponsored plaque for this achievement.

The CQ World Wide DX contest series are perhaps the biggest in the contest calendar, running over the final weekends in September (RTTY), October (SSB) and November (CW). The results of the 2015 series have now been published, and show that 9 new Irish records were set during this series:

## CQ WW DX Contests : (selected certificates opposite) New Irish Records set during the 2015 Series

### RTTY (26/27 September)

- Multi-Op Single-TX : **EI7M** (Ops: EI3JE EI3JZ EI3KD EI2FG EI6HB)  
(Also 2nd in Europe, 2nd in World)
- Single Op – High Power – All Bands : **EI5KF**
- Single Op – High Power – 20m : **EI7KD**
- Single Op Assisted – Low Power – 20m : **EI8GXB**

### SSB (24/25 October)

- Multi-Op Multi-TX : **EI9E** (Ops: EI2FG EI5DI EI5KG EI5HTB EI7FJ EI6GF EI8CE EI9HQ M0MAT M0WLF)
- Multi-Op Single-TX – Low Power : **EI1E** (Ops: EI4KH EI5KF)
- Single Op Assisted – High Power – All Bands : **EI6JK**
- Single Op – 24h – Low Power : **EI4GNB**



## CW (28/29 November)

- Single Op – Low Power – 80m : **EI5DI**  
1st in World

## Shorter Contests

Moving on from 48 hour marathons to *shorter contests*, a theme I focused on during the Workshop Talk on contesting at the recent AGM weekend: most IRTS contests fall into the 'shorter' category, and their continued popularity is, I suspect, partly due to their brevity: there is no need to set aside a full weekend for our counties contests! Yet, many of the rewards that can be reaped from contesting – such as testing and improving operating skills, learning about propagation or just having fun – can be gained from these short events.

Many European national societies run short contests throughout the year, details are available in the contest calendars (my favourite contest calendar is the *PG7V Contestcalendar* – see link at the end of this article). Also, the United Kingdom and Ireland Contest Club (UKEICC) runs one hour evening contests during the months of September to April, in which EI stations have been very active.

RSGB run nearly 40 short HF contests every year, including some with non-conventional exchanges, making them both challenging and enjoyable, examples being:

- Rotating Locators (90 minutes), where the exchange includes the six-character QRA (Maidenhead) Locator received from the previous contact.
- Remember the EU Sprints, now discontinued? With the agreement of the EU Sprint organisers, RSGB is now running International Sprint contests (4 hours) in a similar format: the exchange must include the call sign of both stations, your serial number and your name; the station initiating the QSO must then QSY.

## Forthcoming IRTS Contests

The three 24-hour Field Day contests take place over the next few months; at one time, these Field Day events were the

highlight of clubs' annual activity calendars, but seem to have fallen out of favour in recent years. We tweaked the rules for the HF events last year, principally by introducing a restricted 6-hour section, aimed at single ops and clubs that don't wish to operate overnight.

Please consider entering one or more of these contests, they can be great fun and make a perfect club outing. All coincide with similar contests in other Region 1 countries, so there should be no shortage of stations to work:

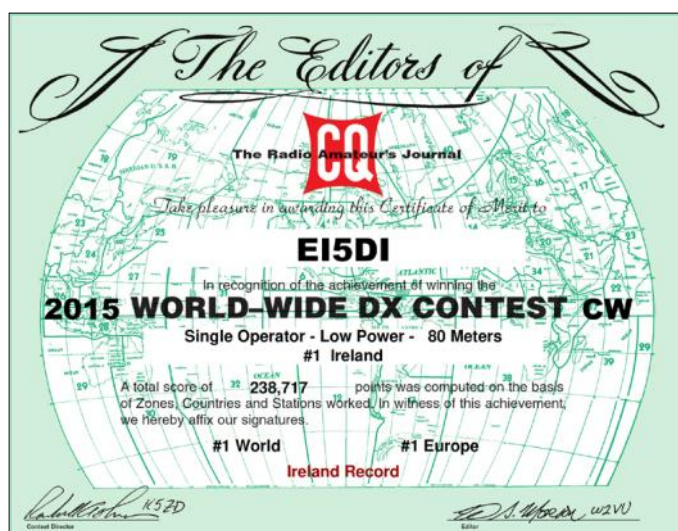
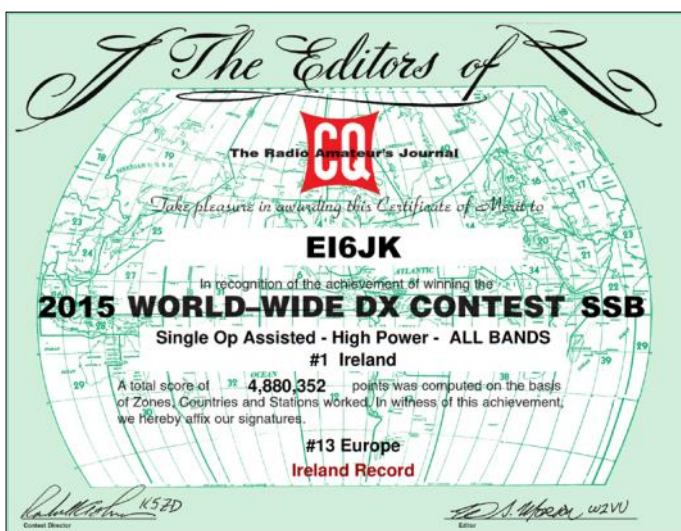
- **CW Field Day** – Saturday 4th June at 15:00 UTC
- **VHF/UHF Field Day** – Saturday 2nd July at 14:00 UTC
- **SSB Field Day** – Saturday 3rd September at 13:00 UTC

On Sunday 28th August we have another 2 Metres Counties Contest, from 2.00 pm to 4.00 pm local time.



## Links:

Contest rules & calendar:	<a href="http://www.irts.ie/contests">www.irts.ie/contests</a>
Contest results:	<a href="http://www.irts.ie/results">www.irts.ie/results</a>
UKEICC contests:	<a href="http://www.ukaicc.com">www.ukaicc.com</a>
RSGB HF contests:	<a href="http://www.rsgbcc.org/hf">www.rsgbcc.org/hf</a>
PG7V Contest Calendar:	<a href="http://www.cqcontest.eu">www.cqcontest.eu</a>



## IRTS Contests : Section Winners

80 Metres Evening Counties Contest (SSB), 9th February 2016	
Leading Irish station (EI/GI)	EI2CA, Paul Martin
Leading station outside Ireland	2E0KVJ, David Boyes
2 Metres Counties Contest, 28th March 2016	
High Power Portable (EI)	EI5HBB/P, Eoghan Kinane & John Ronan
Low Power Portable – max 10W (EI)	EI7GEB/P, David Morgan
High Power Fixed (EI)	EI4KH, Denis O’Flaherty
High Power Fixed (Outside EI)	MI0YCK, Declan Mayock
Low Power Fixed – max 10W (EI)	EI3ENB, Paul Norris
FM Only – Single Op. (EI)	EI5HIB/P, Noel O Loughlin
FM Only – Single Op. (Outside EI)	2I0EKN/M, William Martin
SWL	EI1696, Albert White

### IRTS 2m Counties Contest



*Noel EI5HIB on the Ridge of Cappard,  
Co. Laois*



*ZL Special and collinear at EI7DAR/P  
Co. Louth*



*Niall EI6HIB on Kippure,  
Co. Wicklow*



*John EI7IG, who operated with Eoghan EI5HBB  
on Tory Hill, Co. Kilkenny*



*David EI7GEB on Foildarg Hill,  
Co. Tipperary*



*Niall EI6HIB on Kippure,  
Co. Wicklow*



*Owen EI4GGB on Cnoc Aiste, Co. Westmeath*



*Rolande EI6CZ at his home QTH, Co. Clare*

#### 2m Counties Contest

On Sunday 28th August we have another 2 Metres Counties Contest, from 2.00 pm to 4.00 pm local time.

Make sure to join in this fun event!

Logs to [contestmanager@irts.ie](mailto:contestmanager@irts.ie)





## IARU Contest 2016

This year's IARU HF World Championship takes place on 9/10th July. Dozens of IARU member-society HQ stations worldwide will be QRV on both CW & SSB on the six contest bands from 160 to 10m.

IRTS holds the callsign EI0HQ for use in this contest. This year, it will be used by the newly-formed EI DX Group. They are assembling a comprehensive multi-multi station in the grounds of Garbally College, Ballinasloe - aiming for a high placed European result.

[www.iaru.org/contests.html](http://www.iaru.org/contests.html)

## EI HF IOTA Standings Table on the web site

The RSGB Islands On The Air programme encourages contacts with island stations worldwide.

Islands have been grouped into 1200 'IOTA Groups', each with its own IOTA reference (Ireland and its offshore islands account for six of these references).

EI stations have been active in the IOTA programme, with many dedicated island chasers and activators. The IOTA Contest, in July every year, provides an opportunity to work islands around the world in a short space of time.

Recognising the popularity of IOTA among EI stations, the society's HF Manager Dave Court EI3IO has introduced the **EI HF IOTA Standings Table** which is regularly updated on the IRTS web site. The table shows Island Groups worked by continent, as well as the number of confirmed IOTA Island Groups officially credited by the RSGB. To give a flavour of how this looks, we show below the web site Standings Table at the time of going to press.

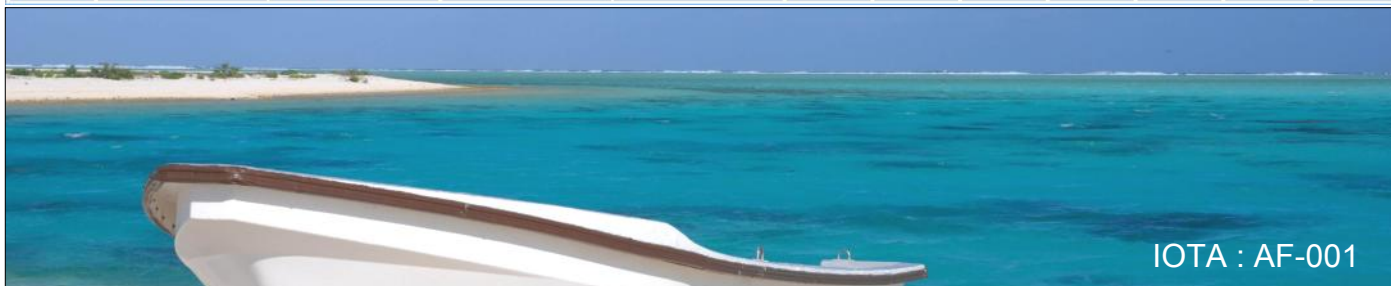
Have a look at [www.irts.ie/iotalist](http://www.irts.ie/iotalist) for more background on this initiative, and please keep Dave EI3IO up to date with your IOTA programme progress.

### EI DXCC Single Band Status as at 21st May 2016

Compiled by Joe Ryan EI7GY

		160	80	40	30	20	17	15	12	10	6	2
10	EI2JD	160	80	40	30	20	17	15	12	10	6	
10	EI3IO	160	80	40	30	20	17	15	12	10	6	
10	EI7BA	160	80	40	30	20	17	15	12	10	6	
10	EI9FBB	160	80	40	30	20	17	15	12	10	6	
9	EI2GLB		80	40	30	20	17	15	12	10	6	
9	EI6IZ	160	80	40	30	20	17	15	12	10		
8	EI6FR		80	40	30	20	17	15	12	10		
8	EI7GY		80	40	30	20	17	15	12	10		
8	EI9FVB		80	40	30	20	17	15	12	10		
7	EI1DG		40	30	20	17	15	12	10			
7	EI4BZ		80	40	30	20	17	15		10		
6	EI7JZ		40		20	17	15	12	10			
6	EI8IU			30	20	17	15	12	10			
5	EI4CF		40		20	17	15		10			
5	EI4GJB				20	17	15	12	10			
5	EI6AL				20	17	15	12	10			
5	EI6JK		40		20		15	12	10			
5	EI8GS		80	40		20		15		10		
5	EI9E		80	40		20		15		10		
5	EI9GLB					20	17	15	12	10		
5	EI9JF		40	30		20	17	15				
4	EI3GV				20	17	15		10			
3	EI3CTB				20		15		10			
3	EI4GK				20		15		10			
3	EI4GNB				20		15		10			
3	EI4HH				20		15		10			
3	EI6FM				20		15		10			
3	EI6HB				20		15		10			
3	EI7GL		40							10	6	
3	EI9HQ				20		15		10			
2	EI2II				20				10			
2	EI5IF				20		15					
2	EI7IG				20		15					
2	EI7JN				20		15					
2	EI8JX				20		15					
1	EI3EBB										6	
1	EI3HA				20							
1	EI4DQ											2
1	EI5EV								10			
1	EI5FQB				20							
1	EI5GSB				20							
1	EI6S		80									
1	EI8IQ				20							
1	EI9CJ									10		
		160	80	40	30	20	17	15	12	10	6	2

Pos	Call	Name	Worked	Awarded	AF	AN	AS	EU	NA	OC	SA
1	EI7CC	Peter	960	959	93	15	167	187	207	197	93
2	EI2HY	Anthony	735	642	72	11	108	179	161	133	71
3	EI3IO	Dave	568	411	50	9	74	171	114	102	48
4	EI6IZ	Brendan	348	0	39	8	40	102	73	64	22
5	EI8JX	Axel	186	152	8	2	10	107	43	9	7
6	EI7GY	Joe	158	0	7	1	8	95	38	1	8



# **EI DXCC Listings - Compiled by Joe Ryan EI7GY** as at 21st May 2016

Entries in Bold Type show changes since 17th February 2016

<b>Mixed</b>	244 EI4BZ	224 EI1DG	<b>206 EI7JZ (+5)</b>	105 EI9JF	<b>156 EI7JZ (+5)</b>
365 EI8H (SK)	<b>238 EI5GM (+7)</b>	<b>199 EI2GLB (+13)</b>	196 EI4BZ	104 EI4GK	144 EI7GL
<b>357 EI6S (+1)</b>	230 EI7GY	<b>198 EI8IU (+7)</b>	186 EI1DG	104 EI7IG	136 EI4GK
353 EI7CC	211 EI1DG	195 EI8FH	173 EI9E	100 EI6FM	133 EI6FM
348 EI6FR	<b>200 EI8JX (+4)</b>	129 EI3CTB	171 EI7JN		131 EI7GY
346 EI8EM	<b>190 EI9FVB (+19)</b>	121 EI6HB	171 EI9GLB	<b>12m</b>	123 EI9GLB
345 EI7BA	169 EI7IG	108 EI5IF	161 EI6JK	<b>324 EI7BA (+2)</b>	116 EI3CTB
340 EI2GS (SK)	168 EI4HH		161 EI7GY	<b>281 EI9FBB (+1)</b>	<b>116 EI9HQ (+13)</b>
<b>333 EI9FBB (+4)</b>	<b>164 EI7JZ (+9)</b>	<b>160m</b>	152 EI8JX	<b>204 EI8IU (+9)</b>	112 EI4GJB
<b>329 EI5GM (+5)</b>	127 EI9CF	<b>250 EI7BA (+5)</b>	145 EI6HB	<b>202 EI9FVB (+17)</b>	111 EI4GNB
<b>328 EI9O (+8)</b>	126 EI4BK	212 EI3IO	144 EI4GJB	<b>180 EI6FR (+8)</b>	111 EI9CJ
326 EI3IO	115 EI9E	142 EI6IZ	<b>139 EI9HQ (+21)</b>	<b>164 EI2GLB (+10)</b>	105 EI6HB
<b>324 EI2GLB (+7)</b>	113 EI2KK	138 EI9FBB	135 EI4HH	155 EI6IZ	104 EI3GV
312 EI8FH	109 EI2IH	122 EI2JD	133 EI5IF	151 EI6AL	101 EI2II
310 EI4II	109 EI4HM (SK)		<b>132 EI5FQB (+26)</b>	147 EI2JD	101 EI5EV
307 EI6IZ	104 EI6HB	<b>80m</b>	130 EI3GV	140 EI6JK	
306 EI2HY	100 EI3CTB	310 EI6S	130 EI6AL	130 EI1DG	<b>6m</b>
306 EI4CF	100 EI3KE	<b>298 EI7BA (+4)</b>	126 EI3CTB	<b>124 EI7JZ (+3)</b>	160 EI3IO
303 EI2CR	100 EI3KG	<b>244 EI9FBB (+3)</b>	126 EI3HA	117 EI7GY	150 EI9FBB
<b>300 EI8IU (+6)</b>		166 EI2JD	117 EI4GNB	106 EI3IO	<b>115 EI7BA (+3)</b>
296 EI2JD	<b>Phone</b>	<b>164 EI6FR (+6)</b>	115 EI7IG	100 EI4GJB	111 EI7GL
<b>295 EI9FVB (+4)</b>	<b>354 EI6S (+1)</b>	142 EI3IO	114 EI6FM	100 EI9GLB	108 EI2GLB
287 EI9JF	351 EI7CC	137 EI6IZ	113 EI4GK		107 EI2JD
<b>283 EI7JZ (+7)</b>	346 EI8EM	<b>120 EI2GLB (+4)</b>	112 EI8IQ	<b>10m</b>	101 EI3EBB
275 EI9GLB	343 EI7BA	119 EI4BZ	105 EI2II	<b>307 EI7BA (+1)</b>	
269 EI8GS	338 EI2GS (SK)	108 EI7GY	102 EI5GSB	<b>284 EI9FBB (+2)</b>	<b>2m</b>
265 EI4BZ	<b>338 EI6FR (+2)</b>	107 EI9E		257 EI3IO	145 EI4DQ
264 EI6AL	331 EI8AR	103 EI8GS	<b>17m</b>	<b>227 EI2GLB (+2)</b>	
262 EI2GX	<b>321 EI9FBB (+2)</b>	100 EI9FVB	334 EI7BA	<b>221 EI6FR (+4)</b>	
248 EI1DG	309 EI3GV		<b>306 EI9FBB (+5)</b>	<b>211 EI9FVB (+17)</b>	
243 EI6JK	<b>303 EI9HX (+39)</b>	<b>40m</b>	<b>288 EI6FR (+10)</b>	199 EI4CF	
<b>242 EI5GUB (+113)</b>	300 EI4GK	<b>318 EI7BA (+2)</b>	<b>227 EI8IU (+8)</b>	197 EI2JD	
237 EI7GY	300 EI8AU (SK)	<b>257 EI9FBB (+3)</b>	225 EI6IZ	<b>191 EI8IU (+6)</b>	
235 EI4HH	<b>291 EI2GLB (+9)</b>	<b>246 EI6FR (+10)</b>	<b>210 EI2GLB (+10)</b>	183 EI4BZ	
230 EI4GXB	<b>288 EI9FVB (+4)</b>	209 EI4CF	<b>202 EI9FVB (+7)</b>	173 EI6JK	
214 EI5IF	280 EI2JD	208 EI6IZ	191 EI2JD	171 EI8GS	
210 EI6IL	275 EI4CF	202 EI2JD	166 EI6AL	167 EI1DG	
209 EI7JN	275 EI9GLB	<b>191 EI2GLB (+11)</b>	163 EI7GY	166 EI4HH	
203 EI9E	<b>272 EI7JZ (+6)</b>	185 EI3IO	162 EI4CF	165 EI9E	
193 EI3HA	269 EI8GS	177 EI9JF	<b>148 EI7JZ (+7)</b>	162 EI6IZ	
191 EI6HB	<b>266 EI8IU (+7)</b>	154 EI6JK	146 EI9JF	159 EI6AL	
<b>189 EI9HQ (+12)</b>	241 EI6JK	139 EI4BZ	142 EI1DG		
188 EI4IR	225 EI9JF	<b>138 EI7JZ (+6)</b>	129 EI3IO		
187 EI6FM	222 EI8FH	134 EI9E	127 EI4GJB		
175 EI7IG	213 EI7GL	129 EI8GS	120 EI9GLB		
174 EI3CTB	212 EI4HH	<b>121 EI9FVB (+3)</b>	110 EI4BZ		
165 EI5EV	209 EI4BZ	120 EI7GY	108 EI3GV		
160 EI4GZB	208 EI4GJB	117 EI7GL			
<b>160 EI5FQB (+24)</b>	200 EI6IL	111 EI1DG	<b>15m</b>		
158 EI4GNB	198 EI9E		<b>333 EI7BA (+2)</b>		
136 EI9CN	191 EI3HA	<b>30m</b>	<b>305 EI6FR (+8)</b>		
135 EI9CF	188 EI2CH	<b>332 EI7BA (+5)</b>	<b>304 EI9FBB (+5)</b>		
131 EI5GSB	186 EI7II	<b>256 EI9FBB (+2)</b>	251 EI4CF		
128 EI8HA	<b>186 EI9HQ (+15)</b>	<b>239 EI6FR (+8)</b>	<b>250 EI2GLB (+13)</b>		
127 EI9CJ	185 EI6AL	225 EI6IZ	<b>243 EI9FVB (+10)</b>		
116 EI6CPB	184 EI6FM	223 EI3IO	<b>235 EI8IU (+7)</b>		
115 EI5JQ	177 EI5IF	167 EI9JF	231 EI2JD		
104 EI9GWB	177 EI9FE	<b>159 EI2GLB (+24)</b>	216 EI6IZ		
103 EI3HDB	160 EI2II	156 EI7GY	204 EI3IO		
101 EI7JQ	<b>160 EI5FQB (+24)</b>	124 EI2JD	202 EI4BZ		
101 EI8JB	160 EI6HB	<b>123 EI8IU (+1)</b>	193 EI6JK		
100 EI3GAB	143 EI3CTB	120 EI4BZ	<b>183 EI7JZ (+8)</b>		
100 EI4HQ	137 EI4GNB	<b>106 EI9FVB (+4)</b>	181 EI8GS		
100 EI8KF	134 EI9CN	102 EI1DG	179 EI9E		
	131 EI5GSB		178 EI1DG		
	116 EI6CPB	<b>20m</b>	162 EI6AL		
<b>CW</b>	114 EI4EX (SK)	<b>340 EI7BA (+1)</b>	151 EI7GY		
<b>339 EI7BA (+1)</b>	105 EI1CS	<b>336 EI6FR (+3)</b>	148 EI4HH		
333 EI7CC	103 EI3HDB	<b>326 EI9FBB (+5)</b>	138 EI9GLB		
330 EI6FR	103 EI6GGB	257 EI2JD	136 EI6HB		
<b>319 EI9FBB (+5)</b>	102 EI1DG	256 EI4CF	<b>126 EI8JX (+1)</b>		
305 EI8FH	102 EI4DJB	251 EI3IO	122 EI3CTB		
303 EI6IZ	101 EI3IP	<b>251 EI9FVB (+5)</b>	120 EI4GJB		
293 EI4CF	100 EI3GAB	<b>248 EI2GLB (+14)</b>	119 EI4GNB		
<b>290 EI2GLB (+11)</b>		238 EI6IZ	113 EI3GV		
279 EI2JD	<b>RTTY/Digital</b>	<b>233 EI8IU (+10)</b>	109 EI7JN		
<b>274 EI8IU (+7)</b>	<b>304 EI7BA (+3)</b>	217 EI9JF	107 EI5IF		
253 EI9JF	<b>229 EI6FR (+14)</b>	211 EI8GS	<b>105 EI9HQ (+4)</b>		
246 EI6AL					

## **DXCC Honor Roll**

<b>Mixed</b>	<b>Phone</b>
339 EI6FR/348	337 EI7BA/343
339 EI7BA/345	337 EI8EM/346
338 EI7CC/353	336 EI6S/354
337 EI6S/357	336 EI7CC/351
337 EI8EM/346	<b>330 EI6FR/338</b>
336 EI8H/365 (SK)	(New)
331 EI2GS/340 (SK)	
<b>330 EI9FBB/333</b>	<b>CW</b>
(New)	<b>334 EI7BA/339 (+1)</b>

## **DXCC Challenge**

<b>2911 EI7BA (+12)</b>	1155 EI1DG
<b>2526 EI9FBB (+26)</b>	1090 EI6JK
<b>2069 EI6FR (+66)</b>	<b>1083 EI7JZ (+51)</b>
1848 EI3IO	<b>1059 EI5GM (+29)</b>
1767 EI6IZ	1018 EI9JF
1729 EI2JD	
<b>1726 EI2GLB (+91)</b>	
1720 EI7CC	
<b>1500 EI9FVB (+70)</b>	
1466 EI4CF	
<b>1390 EI8IU (+54)</b>	
1160 EI7GY	
1156 EI4BZ	



### Silent Key

#### Matthew L. Merry W2MAT/EI4ID

Matthew L. Merry aged 87 of Moorestown passed away on April 11th 2016. Born in Lawrence, Kansas, he was an Army Veteran serving his country during the Korean conflict, and was a retired self-employed entrepreneur. Matt was an avid ham radio operator, a member of South Jersey Radio Club and the Burlington County Radio Club.

Matt enjoyed dancing, fishing and hunting. He also held the callsign EI4ID, and was well known throughout the Irish Amateur Radio community for his weekly Irish Hour nets every Sunday on 21.317 (317 for March 17<sup>th</sup>) and had many friends whom he looked forward to meeting on air. Matt's wife Sheila is from Castleisland Co Kerry, and Matt loved operating from there on his vacations to Ireland.

He also loved keeping in touch with Irish Amateur Radio news through Echo Ireland, especially his relatives and friends in the Kerry Amateur Radio Group. Matt was also heavily involved in ARES (Amateur Radio Emergency Service) in his locality Moorestown.

Matt is survived by his beloved wife Sheila, his cherished grand-daughter Jessica King and his dear great grand-daughter Lennon King. Matt is predeceased by his daughter Peggy.

*May he rest in peace*

### Silent Key

#### John B. McCormick GI7FCP

John B McCormick, GI7FCP, passed away in April 2016. John had been a member of IRTS since 1993.

*May he rest in peace*

### Silent Key

#### Tom Kelly EI2AJ

Tom Kelly EI2AJ passed away on 18th April 2016. Tom was a good friend of the late Dan Lloyd and, like him, worked for Marconi International for a period. Up to the mid 1990's he was with BIM.

From the mid 1990's Tom was a regular attendee at the Phoenix Radio Club gatherings on Thursday evenings in Coolmine Community School. Tom was a keen CW operator. His health had been declining in recent years and he had become less active in the Club.

We offer our sincerest sympathy to his wife Anne to his daughter Margaret and to his sons Michael and Nick as well as to his extended family and friends.

*May he rest in peace*

### Silent Key

#### William Hillick EI5IJ

William Hillick EI5IJ of the Downs, Mullingar, Co. Westmeath passed away in a light-aircraft accident on 20th March 2016.

William ran CQ Communications on Ormond Quay in Dublin.

*May he rest in peace*

### Silent Key

#### Rona (Ro) Doyle EI7CXB

The death has occurred of Ro Doyle EI7CXB on Saturday 14th May 2016. Rona was laid to rest in Shannon Cemetery.

*May she rest in peace*

**Echo Ireland - the Journal of IRTS**, the Irish Radio Transmitters Society, is published quarterly. The Society also publishes **EiNews** - a monthly newsletter.

Private advertisements from paid-up members are published free of charge.

Articles and event information for publication are welcomed. Send your manuscript to [newsteam@irts.ie](mailto:newsteam@irts.ie) as a word-processing file attachment, **not as a PDF**. Please do not attempt to format the document to look like a printed page. Images and illustrations should be embedded in the file *for position only*. They should also be sent as separate file attachments in high resolution. Make sure to put captions for all images and illustrations at the end of the article, rather than embedded within the images or the main text of your article. Please include the full names and call signs of people included in photos and where necessary obtain their permission.

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#### IRTS QSL Service Special Event Call Signs

The outwards and inwards QSL service is available free to IRTS members, whether individuals or clubs, for their own call and for special event stations licensed to them.

The service is also available free to JOTA stations, irrespective of whether an IRTS member is the licence holder. Operators of Special Event stations should supply details of their Special Event call to the relevant incoming QSL Manager.

#### Echo Ireland September 2016

Copy deadline - **10th August**  
Articles to [newsteam@irts.ie](mailto:newsteam@irts.ie)

## Members Ads

**For Sale:** Icom IC-7410 HF/50MHz Transceiver, as new, with Box, Manual, Microphone, DC Power Cable. €1600.

Yaesu VX-7R 50/144/430 MHz Handheld Transceiver w. Wideband RX €150.

RigExpert Plus Transceiver Interface €80.

RigExpert Cable €10.

Kenwood MC-52DM DTMF Microphone €60.

Icom HM-198 Microphone €35.

Seamus EI9CF 086 357 4756.

**For Sale:** 6-Band Broadband Hexbeam 20, 17, 15, 12, 10 and 6m plus 1:1 balun, all in good condition. €400  
Buyer collects or will swap for an MA5B in good condition. .  
Nicky EI3JB 087 612 3261.

**For Sale:** Icom IC-7400 HF/VHF Transceiver in as new condition  
Price €750 ono.  
Nicky EI3JB 087 612 3261.

**For Sale:** Icom IC7100 - HF/VHF/ UHF transceiver - Includes 4m - perfect condition €1,050.  
SEM TranZmatch 160m - 10m Z Match €100.  
Yaesu FT2800 2m FM transceiver €90.  
Philips FM1100 4m FM transceiver €50.  
Gerry EI8DRB 087 799 6336.  
gerryk@gmail.com

**For Sale:** TS790A 2m, 70cms, 23 cms (module not fitted) all mode. Full duplex for satellites. with mic and manual €475.  
Tonna F9FT 19/9 70 cms/2m crossed yagis €125  
AR35X rotator €50  
The lot €600.  
Joe EI5EV 086 375 1066  
[murphyjoe628@gmail.com](mailto:murphyjoe628@gmail.com)

**Free to a Good Home:** 6 foot (2m) fibreglass prime-focus dish, good to 12 GHz.  
Needs 1 new feed arm but other 2 are OK. Easily motorised with one or two screw jacks for 3cm EME. Very heavy, so will need a small lorry or large trailer. Tony EI8JK [ei8jk@amsat.org](mailto:ei8jk@amsat.org)

## IRTS Shop

IRTS Members can avail of a 10% discount on purchases from the RSGB on line shop.

IRTS members should select the “**Non members Price**” before placing the order and then enter the special IRTS Discount Code during the checkout process. At this point the 10% discount will be calculated.

IRTS members who are also RSGB members should continue to select the “**RSGB Member's Price**” and not use the IRTS Discount Code.

The IRTS Discount Code will change from time to time. Currently the Code is:

**IRTS2020XWW**

The RSGB Shop can be accessed from the link on the IRTS website or at

[www.rsgbshop.org](http://www.rsgbshop.org)

The RSGB Shop stocks a comprehensive range of books on radio and related topics by RSGB and other publishers.

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## LONG COMMUNICATIONS

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### Uniden UBC 75 XLT

Frequency Range

25 - 512MHz

Frequency Steps

5, 6.25, 8.33, 10, 12.5

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**Uniden**  
**Bearcat**



### Uniden UBC 360 CLT

300 Memory Channels

0.5 - 1.72 MHz (AM Radio)

25 - 174 MHz, 406 - 512 MHz

806 - 960MHz

Alarm and Clock Radio €125

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- 50m of multi-stranded copper rope
- 14 gauge (2mm diameter)
- Will not tangle or stretch
- Ultra flexible, solder or clamp
- Price €50



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High-quality ATU

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- **Freq:** 1.8 - 60 MHz
- **Power:** 300W (SSB)
- **Antennas:** 2 co-ax inputs
- **Input Connector:** SO239
- **Cross needle** illuminated display panel
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- **30W/300W** Average/PEP
- **Impedance:** 10 - 600 Ohm
- **Size:** 250 x 93 x 200 mm

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